# A Clinical Lecture

ON

# FRACTURE OF THE NECK OF THE FEMUR IN CHILDHOOD.

*Delivered at the Melbourne Hospital for Sick Children*

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GENTLEMEN,—I have two cases of injury to the hip in young children to bring before you; the contrasting of the two is important. The first is a little girl, aged four years, brought to me in the out-patient room a few days ago with the following history. She was perfectly well until a month ago, when she fell from a gate on to the pavement and hurt the right hip. Since then the child has been limping and the limping and pain are becoming worse. The pain is much worse at night. Let me here remark that this history may or may not be of importance, it may or may not be trustworthy, for the poor, hard-worked mother can hardly be expected to be an accurate clinical observer and the insidious signs of early hip disease may easily have been overlooked by her before the accident. If this were so the blow on the hip, even though a trivial one, might easily light up the smouldering mischief and thus impart to the mother's mind a false notion as to the severity of the injury and as to the relationship between the injury and the present condition of lameness and suffering. The weight which the history will have with us then will depend largely upon the result of the physical examination which we proceed to make now. Stripped of all clothing it is seen that the child stands with the right thigh slightly flexed upon the pelvis, the knee bent, the heel raised from the ground so that the limb is resting on the forepart of the sole; there is also distinct eversion of the limb. On laying the child on her back the position of slight flexion, abduction, and eversion is maintained, while on inspecting the buttocks we find on the affected side partial obliteration and marked dropping of the gluteal fold; any attempt at free passive movement of the joint in any direction is vigorously resisted. Thus we have presented to us a clinical picture with which we are very familiar indeed, but the most important investigations have yet to come. In a paper published last year on the Early Diagnosis of Hip-joint Disease[1] I dwelt upon the enormous difficulties which may encompass the diagnosis of hip disease in its earliest stages, pointing out that this is due to the seemingly capricious way in which what are called the cardinal signs and symptoms may be conspicuously absent. Thus a child may be presented with a limp and with no pain; or, on the other hand, he may come with complaints of pain and without any limp. In either case there may be a complete absence of any alteration of the gluteal fold or limitation of movement of the joint or local tenderness. Thus it is not surprising that the error of overlooking hip disease in a very early stage is one of extreme frequency; in fact, it appears to me to be in certain cases practically unavoidable. I stated in the paper alluded to that so far as my own personal experience had served me there was only one sign which I had never found to be grievously misleading on occasions, but that I was quite prepared to find that it also would some day prove treacherous. The sign I refer to is general muscular wasting of the suspected limb or, rather, I should perhaps say, the absence of such wasting—for I must not be misunderstood as saying that wasting is a proof of hip disease or any other tuberculous lesion. Such a statement would be obviously absurd, for wasting may occur in various other conditions, some of which—notably certain examples of infantile paralysis—are very prone to be confused with hip disease. The presence of wasting in a suspected case can never be more than confirmatory of other evidences of hip disease, but its absence is a feature of supreme significance in guiding us towards a correct diagnosis. Thus I should say in respect of such a case if wasting is present the case may or may not be hip disease; if wasting is altogether absent, however, I believe we might safely conclude that the case is not hip disease. I repeat that it is the absence, not the presence, of wasting which is of such high diagnostic value. The method we adopt for estimating the wasting is repeated circumferential measurement of the limb at various corresponding levels with a tape measure. Certain obvious precautions must, of course, be taken, the limbs must be placed in exactly similar positions, the levels at which the measurements are taken must be accurately corresponding and the same individual must make the measurements in both limbs. In addition to the thigh, measurement of the calf is most important and usually affords the most satisfactory evidence of all. A veil of mystery still hides from us the true explanation of the wasting so universally associated with tuberculous disease; of one thing only may we be quite certain, which is that such wasting is a thing quite distinct from wasting due to disuse. I could desire no better illustration of the truth of this statement than is afforded by a comparison of our two cases.

CASE 1.—Measurement in this case disclosed distinct general wasting of the injured limb, but no alteration in length; it was regarded as a case of hip-disease and was treated as such.

CASE 2.—The patient is a little girl, aged three years, who is under the care of my colleague, Dr. Jeffreys Wood. She comes with a very similar history to that which we have just heard. About six weeks ago she had a fall on the hip and has been quite lame ever since—in fact, she refuses to make any attempt to walk. Many of her symptoms are similar to those of the first child. Thus she resents any movement of the right hip; she lies with it more or less flexed and always everted and there is marked dropping and diminution of the gluteal fold. She, however, has no marked pain at night, while the tendency to flexion does not seem to be insurmountable as in the first case, but the leg can be quite straightened although the eversion persists. The tape-measure, however, affords striking information, for we find on measuring the calves that there is no wasting of the affected leg whatsoever, while in the case of the thighs there is a slight disparity, but it is actually in favour of the injured limb.[2] On measuring now the length of the two limbs from the anterior superior spine to the inner malleolus we find that the affected limb is shortened by half an inch, and a further scrutiny easily makes it clear that the shortening is in the neck of the bone and that the trochanter is raised half an inch above Nélaton's line. Now it is quite true that this sign is commonly produced in hip disease by a process of absorption, but it is obvious that we may exclude any such consideration here. Both the shortness of the time and the absence of wasting forbids any such supposition; in fact, the shortening, together with the absence of wasting, are, in conjunction, quite irreconcilable with the theory of hip disease. There can be no doubt that the case is one of fracture of the neck of the femur.

Fracture of the neck of the femur in young children is an injury which has been grievously overlooked in the past; hence we must acknowledge our indebtedness for a most valuable paper recently published by Dr. Royal Whitman of New York. From this we gather that this accident is by no means of such rarity as I should have expected to learn, but that, on the contrary, it is an injury which occurs with sufficient frequency, for Dr. Whitman has himself seen no less than 10 cases in the course of 5 years. From a study of our two cases you will be easily able to conceive that in the absence of especial care in the use of the tape-measure such a fracture may very readily find its way into the category of cases of hip disease, and I have no doubt that this has been the usual fate of such injuries in young children. The mistake in diagnosis having once been made the further course of the case is easy to imagine; the child is put into a Thomas's splint, which no doubt will afford considerable relief, and after a few months of this treatment the limb will be found to have largely regained its utility and the surgeon will cherish the belief that the disease has become cured under his treatment. It is true that there will be some shortening and adduction of

[1] Inter-colonial Medical Journal of Australasia, September, 1897.

[2] The explanation of this is very simple. The attachments of the muscles passing from the pelvis to the limb are approximated by the shortening. It is obvious that, given an equal bulk of the thigh muscles in the two limbs when one set of thigh muscles is shortened, such diminution in length must be attended by corresponding increase in circumference.

the limb, but on the whole there is ample ground for satisfaction at having got rid of the disease in so short a time and without abscess formation. We could regard an error of diagnosis with tolerance if the worst evil resulting from it could be shown to be merely an erroneous belief that we had treated a case of hip disease with great skill and success, but unfortunately this is by no means the case. If we refer to the account of the 10 cases narrated by Dr. Whitman we make the striking discovery that although the result may seem to be fairly good after only a few months have elapsed since the injury, yet the shortening steadily increases as the years pass by and goes on increasing. The explanation given by Dr. Whitman of the causes of this progressive shortening do not appear to me to be quite sufficient; he attributes it to the depression from yielding, due to too early use of the limb during the process of repair and to the later sinking of the neck due to the strain to which it is exposed by the deformity. That which, however, appears to me to be by far the most potent factor in the production of the increased shortening is the altered position of the upper fragment containing the growing epiphysis and the consequent elongation of this upper fragment in a faulty direction. When fracture of the femoral neck occurs, with the consequent drawing up of the trochanter, there is brought about a rotation of the head fragment upon an antero-posterior axis, so that the growing fragment, instead of inclining obliquely downwards, has its direction altered to one more directly outwards. The effect of this will be at once understood by a reference to Fig. 1 and Fig. 2. Fig. 1 depicts the neck obliquely and normally placed; in Fig. 2 the obliquity is represented for the sake of

FIG. 1.

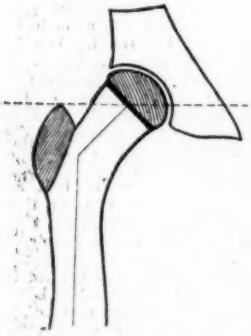
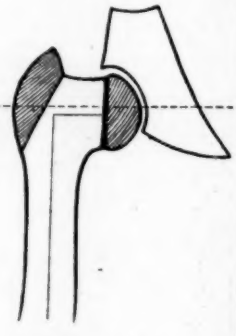


FIG. 2.



simplicity as completely abolished, so that the direction of the neck is horizontal. Now it is clearly by virtue of the obliquity of the neck that the upper epiphysis contributes to the production of the length of the limb throughout the whole period of growth; it is therefore equally evident that when the obliquity of the neck is abolished, as in Fig. 2, the contribution of the head epiphysis to the length of the limb ceases. The same considerations hold good for change in the direction of the neck of any degree intermediate between the normal direction and the complete effacement of obliquity portrayed in Fig. 2, and the impairment of the function of the head-epiphysis as a length-producing agent will be in exact proportion to the deflection upwards of the neck as a result of the injury. It is needless to say that while growth progresses normally in the other limb the injured member will lag behind its fellow, so that the shortening will be increasing and progressive throughout the entire period of growth. Looking again at Fig. 2 I would observe that although the production of length by the growth of the head-epiphysis is abolished once and for all by the deformity resulting from the fracture the epiphysis does not thereby become inactive; its growth proceeds, but the growth which should have been productive of increased length is now converted into an agency for the production of a wholly-evil increase in breadth. Now this increase in breadth through the lengthening of the misplaced neck serves only to increasingly accentuate the alteration of the angle formed by the neck with the shaft of the bone; and the rendering of this angle more acute means a commensurate degree of adduction of the limb, and adduction of the limb further implies a proportionate degree of apparent shortening, together with a slight though practically inconsiderable amount of real shortening. Thus we are confronted with two distinct and separate agencies at work to bring about progressive and increasing disability throughout the whole period of growth. First, the absolute loss of length owing to the abolition or diminution of length-production by the growth of the head epiphysis; and secondly, the added apparent shortening due to increasing adduction of the limb caused by lengthening of the neck in a horizontal direction; and this heaping of Pelion upon Ossa must inevitably make for disastrous lameness. It is hardly necessary for me to point out the enormous difference thus disclosed between fracture of the neck of the femur in a growing child and a similar injury in the adult. The latter is threatened by none of the progressive evils I have been depicting; and if the fracture happens to be an impacted one we gladly accept the result as it is with the slight amount of deformity present, for that deformity will be the end of it. In the case of a child, however, the importance of recognising the injury and treating it correctly is supreme. The first step towards recognising the nature of the injury is to be alert to the possibility of its presence in every case of even moderately severe injury to the hip in a child. A careful, even fastidious, use of the tape-measure can then hardly fail to lead us to a correct diagnosis.

The treatment is obvious; the indication is to open out the angle formed by the neck with the shaft. By doing this the obliquity of the neck will be restored and in proportion as this is effectively accomplished will the subsequent ills be diminished or annulled. The trochanter must be firmly fixed with one hand while the other abducts the thigh and an efficient retentive apparatus should fix the limb in this position. It is open to question whether the best time for doing this will be immediately after the accident. Personally, I should prefer to allow a period of three weeks to elapse for soft union to become established between the fragments in their faulty position, for I conceive that if undertaken in the first instance it might result in failure to draw the neck downwards, producing instead a most undesirable separation of the fractured surfaces and possibly non-union. Again, in an older case, where union is firm and the progressive shortening in full swing, it would appear that the evil could be largely remedied at any period, either by osteotomy of the femoral neck or of the shaft immediately below the trochanter, abduction of the limb being the object aimed at in either case. Of this, however, I am unable to speak with the confidence born of experience and it is of trivial moment compared with my primary object, which is to point out the importance of accurate diagnosis, the dreadful chain of ills which wait upon its default, and the principles which must guide us in our efforts to combat them.

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THE MEATH HOME OF COMFORT.—This admirable institution provides for the care of epileptic women and girls. It has been in existence some five years and has already done good service. The report of the medical officer, Mr. P. Dundas Minchin, speaks most favourably of the improvement seen in the patients after their stay at the home. But of course all this work costs money and the committee is sorely hampered for want of funds. Although the home is situated in the country, near Godalming, yet there is great need in addition of a small house at the seaside. This would materially improve the health of the patients by means of enabling the committee to send them there for change of air and would also be a great boon to the nurses, whose work is necessarily trying, as a rest house. The hon. secretary is Mrs. L. H. Burrows, the Vicarage, Godalming.

THE PLAGUE IN INDIA.—We are extremely glad to learn from the Anglo-Indian papers received by the last mail that the plague has been rapidly declining of late at Bombay—where on June 24th for the first time since last year there had not been a single death from this disease reported in the city—Karachi and the Punjab districts. There were still a few cases returned at Calcutta. It still remains to be seen, however, whether this decline is to be attributed to the effect of seasonal changes alone or whether there will be any recrudescence of the epidemic on the approach of the cool weather.

# SOUTH AFRICAN DRUGS IN THE TREATMENT OF DYSENTERY AND ULCERATION OF THE STOMACH AND INTESTINES.

BY JOHN MABERLY, M.R.C.S. ENG., L.R.C.P. LOND.

IN THE LANCET of Feb. 6th and 13th, 1897, I published an article entitled "Dysentery and its Treatment, with an Account of Six Years' Experience in the Transvaal and Matabeleland in the Use of Monsonia as the Curative Agent.' In that article I gave records of 100 cases of acute and chronic dysentery treated with Monsonia ovata and Monsonia Burkei resulting in only one death, and a good deal of interest was aroused, especially among Indian medical men, concerning the results obtained. As stated in the above-mentioned article, I was unfortunate in having all my supplies of the plants destroyed during the Matabele rising of 1896 and till now I have been unable to obtain a fresh supply of them. I have, however, at last succeeded, through the kind assistance of Professor MacOwan, the Cape Government Botanist, in obtaining a considerable quantity of the plants in question, so I now hope that the drugs will get a fair trial by my fellow practitioners, and that their value or otherwise will be thoroughly tested by competent observers in other parts of the world.

Since returning to Africa in June last year I have gained a good deal of information, largely through the help of the friend above named, regarding the history and botany of the order to which the plants belong, and I propose in this paper to give a short sketch of what is known up to the present regarding the plants and the uses to which they have been put in the past, as well as the records of one or two fresh cases which have come under my notice and which help to throw some additional light on their action. The natural order Geraniaceæ is very largely represented in South Africa, many species and even genera being peculiar to this country and quite unknown in any other part of the world. The whole genus Monsonia, to which the plants I have chiefly used belong, comes under this head, as also do a great many Pelargonia, including the sub-genera Hoarea, Seymouria, and Polyactium, possessing tuberous or fleshy roots. It is to various species of these plants that we find that peculiar medicinal properties have been ascribed and they seem to have been matters of common knowledge, judging by the records to be found among the writings of the earlier explorers of the country. In the well-known work entitled "Travels in Europe, Africa, and Asia between the years 1770 and 1779," the author, Charles Peter Thunberg, M.D., afterwards Professor of Botany in the University of Upsal, makes the following note respecting his visit to Cape Town in 1773: "Many gerania with their red and pulpous roots grow in the sandy plains near the town, and as these roots are of an astringent nature the country people used them in the diarrhœa and dysentery." The plants here referred to as gerania are some varieties of tuberous-rooted Pelargonia, probably Pelargonium triste, which grows about Table Mountain. The next written records traceable are to be found among the MS. notes of Dr. Mackrill, a medical man of repute at the Cape early in the present century. He had been deputed by Lord Charles Somerset in or about 1814 to travel through the then thinly-peopled district bounded by the Sneeuwberg and the still less known country adjacent to the Great Fish River for the purpose of selecting a site for a Government tobacco farm. During his travels he assiduously registered in his diary everything which came under his notice respecting native or Boer remedies. Among others he notes the use of Monsonia in the treatment of some forms of dysentery. In 1850 Ludw. Pappe, M.D., Colonial Botanist and Professor of Botany in the South African College, published a small work entitled: "Floræ Capensis Medicæ Prodromus, or an Enumeration of South African Plants used as Remedies." In his preface, after expressing regret at the total want of coöperation on the part of the country practitioners in making themselves acquainted with the various domestic remedies commonly used, he says: "There can, indeed, be no doubt amongst reasonable men that, judging from the vast extent of the South African territory and from the richness of its almost inexhaustible flora, many highly useful officinal drugs will still be discovered. However, the greater part of our information on this point we owe not so much to scientific research as to the experience of the colonial farmer residing in the more remote parts of the interior, to occasional travellers, or to the wandering native." In his work we find the following concerning Monsonia: "The Keita of the Hottentots.—The root and herb of this plant are very astringent and used with great success in dysentery." Regarding the Pelargonium triste there are the following remarks: "The scarlet-coloured root of this Pelargonium is somewhat astringent. If dried and pulverised it is useful in diarrhœa and certain forms of dysentery when purgatives have been previously given." Again, under the heading Pelargonium antidysentericum he writes: "This plant, which is indigenous in Namaqualand, has tuberous roots which often attain the size of a man's head, and are called *t'Namie* by the aborigines, who boil them with milk and make use of them in dysentery." He mentions various other Pelargonia as medicinal. Since Pappe's time, Mr. Andrew Smith, M.A., formerly of Lovedale Mission, where he was exceptionally well placed for obtaining the traditional medical lore of the Kafirs and Fingoes, published a work entitled, "A Contribution to the South African Materia Medica," which has run through three editions, the last is dated 1895 and contains a good deal of information gathered from various sources concerning medicinal plants in Africa. He mentions the Monsonia ovata and Monsonia biflora as being well known for their curative properties in dysentery. From these various statements we gather that the medicinal properties of various plants belonging to the order Geraniaceæ have been known to the inhabitants of South Africa for more than a century at least, and it would appear very extraordinary that plants which have been persistently employed for such a length of time should not contain some of the properties which have been ascribed to them. Among the laity diarrhœa and dysentery are terms which have been employed indiscriminately to denote two distinct classes, which, however, they look upon as the same in many instances. My own experience leads me to believe that the plants in question are quite useless in diarrhœa, at any rate in the form of spirit extracts, and are only useful in cases of dysentery or in some other forms of ulceration of the intestines and stomach.

When in England last year I had some specimens belonging to a tuberous rooted species of Pelargonium sent to me in mistake for my old plants the Monsonia ovata, and although at that time I knew nothing of the uses to which these plants had been put, except that I heard through a lay friend that they were very useful in dysentery, I made a tincture in the usual British Pharmacopœia manner from the dried pounded roots. Among other cases in which I used this tincture are the following: one of chronic dysentery and the other of gastric ulcer. For the records of the first case I am indebted to Surgeon-Lieutenant A. W. F. Russell, Indian Medical Service, who was himself also the patient.

CASE 1.—The patient went to India in October, 1894. In February, 1895, he had a slight attack of dysentery at Ferozepore in the Punjab, from which he soon recovered. In June he had a second attack during which he passed several sloughs and it resulted in his being invalided home in October, 1895. He returned to India apparently cured in September, 1896, but in October he had a third attack of dysentery which lasted about eight days, and on Feb. 14th, 1897, he had a fourth severe acute relapse of the disease, the history of which I will give in his own words: "This attack was caused by eating stale and indigestible food for some days and also precipitated by a slight chill. First felt pain in abdomen, then slight diarrhœa. This was on Feb. 14th, 1887. Feb. 15th: Worse during the night, a distinct rigor. Temperature 99·4° F. Feb. 16th: Thirty to forty motions, bright green matter mixed with a considerable quantity of blood. Feb. 17th: Condition worse, stools more frequent, consisting of mucus and blood. Feb. 18th: Worse. Forty to fifty stools *per diem*. All this time taking ipecacuanha and tinctura opii. Feb. 19th: Passed some large sloughs of mucous membrane. Feb. 20th to 22nd: Motions almost continuous, much straining, some sloughs. Feb. 23rd: Seen by a medical board and ordered to proceed to England at once. Started that night for Karachi, carried in dooly to railway station. Improvement at once on being moved, better in train, worse again on arriving at Karachi.

Remained at Karachi till March 4th; started for Bombay, arriving there on the 6th and leaving the same day for London by the P. & O. s.s. *Caledonia*. During the voyage was only once able to come up on deck, motions varying between five and eight per diem, mostly mucus and blood. Arrived in London March 25th. March 26th: Motions seven in number, more blood and mucus. Received a bottle of Dr. Maberly's tincture (supposed to be made from the root of one of the Pelargonia); took three two-drachm doses per diem for three days, then noticed that blood had entirely disappeared from the motions, which, however, remained frequent—five per diem. In two more days mucus disappeared from the stools, which had been somewhat like frog-spawn mixed with fæces. Stools remained too frequent. Then took 1 gr. of opium in the morning. This reduced the stools to one or two *per diem* and gave formed motions with no pain. May 5th, 1897: Have not taken the medicine for a fortnight and the stools remain healthy—one *per diem*—no mucus or blood, but there is a tendency to diarrhœa, especially on cold days. This is easily checked, however, and I have almost recovered my former strength and feel fit for work. I am convinced that the tincture kindly supplied by Dr. Maberly exerted a decided influence in healing the ulcers, which must have existed in numbers in the large intestine."

CASE 2.—This case was one of ulceration of the stomach of some months' standing. The following is the history:—Capetown, Dec. 6th, 1897. The patient was a man, aged thirty-two years, fairly well nourished but weak and sallow-looking. His pulse was 82, feeble and small, and he had suffered for the last twelve months from cramps and pain in the epigastrium at irregular intervals, sometimes daily and continuous, at other times coming on about an hour or more after meals, especially worse after eating meat. The pain sometimes became excruciating and appeared to pass round to the back and was then usually followed by vomiting. The vomited matter was generally partially digested food mixed with a dark-coloured fluid and contained a sediment which the patient said was well described as similar in appearance to coffee-grounds. The bowels were irregular. The motions consisted generally of a small quantity of loose fæcal matter mixed with slime, and passed three or four times a day. They were never what the patient called satisfactory. He was usually seized with an irresistible impulse to stool three or four times a day. His appetite was poor. The patient stated that the first attack occurred in November, 1896, when in Bechuanaland, with pain in the stomach, which gradually became worse and lasted continuously for about five days. The bowels were confined and he vomited bilious matter during this time. On palpating the abdomen a localised tender spot was discovered in the left side of the epigastric region, the stomach was not dilated and otherwise the abdomen and chest were normal. Half an ounce of tincture of pelargonium was given at once and powders of 10 gr. each of the powdered root were administered three times a day for the next three days. The patient was seen again on Dec. 9th and he then stated that he had felt quite well since the first dose of tincture except for an hour or so on the 8th, when he felt some dull pain on the right side of the abdomen. On examination the tender spot in the epigastric region had disappeared; the large intestine appeared to be loaded with fæces, however. 4 gr. of calomel to be followed by 1 oz. of compound mixture of senna were ordered. On Dec. 10th the patient passed a very large motion after taking the draught and said he felt better than he had done for months previously. He was given one more dose of 2 dr. of tincture of pelargonium and had no further medicine. He has been in excellent health for more than four months and is apparently completely cured.

Regarding this case I own I was rather sceptical about the patient's statements as to the results of the drug and was inclined to doubt whether he had not been suffering from a delusion, but I found on inquiries from his employers and the medical man who had treated him previously that he was a trustworthy, hard-working man and that what he told me was evidently quite correct. I have, therefore, risked publishing, although up to the present I have not had any corroborating cases and I hope that it may induce some other members of the profession to give the drug a trial in some typical cases of gastric ulcer and to either communicate their results to THE LANCET or else to myself, so that we may be able to come to a definite opinion on the subject.

It is a great pity that I have not been able up to the present to name the exact species of Pelargonium to which these roots belong, but I do not anticipate any special difficulty in doing so in case the value of the drug is established. It is very similar to the Pelargonium reniforme but, according to Professor MacOwan, is not that plant. Only those who, like myself, have taken an interest in ferreting out the plants used as medicine by some of the colonists, know how tiresome it is to get them to send a flowering specimen of the plants used. Their great idea appears to be to keep the knowledge of any valuable remedy to themselves in the hope of obtaining a large recompense for divulging what they think is a secret. I have specimens of the leaves and a large quantity of the roots, and as they are very distinctive there will be no difficulty in tracing them other than the time and expense of a journey to the districts in which they grow. There are several varieties of similar plants, of one of which—the Pelargorium triste—I have collected a considerable quantity. This one contains a body apparently exactly similar chemically to that of the Pelargonium in question, and probably its action would be similar physiologically, but at present I have not had an opportunity of putting it to the test, although it has been used in the treatment of "diarrhœa and dysentery" successfully according to lay records. I have tried the tincture made from the Pelargonium in another case of chronic tropical dysentery in the Somerset Hospital, Capetown, under the charge of Dr. Elliott, but the result was doubtful although the drug was combined with opium. The patient, however, appeared to improve whilst taking the drug, but I only had a small quantity of it at the time and the treatment was not continued long. However, I think it is pretty certain that these tuberous-rooted Pelargonia will not be found so effectual in the treatment of dysentery as the Monsoniæ, although, judging by Case 1 given above, they also have the same action on ulceration. But for some reason they do not appear to me so certain in their action. They will, however, be very valuable if it is found that they have a specific action on ulceration of the stomach. For diarrhœa they have proved themselves in my hands quite useless. In this respect they are similar to the Monsoniæ. With regard to the latter drug I may state that I gave it lately in large doses (½ oz.) in a case of acute diarrhœa with mucus and blood in the stools which, however, was not, I think, pure dysentery, the peculiar tenesmus of that disease being wanting. The drug had no effect whatever. This form of enteritis is not uncommon here; it yields at once to a powder of the compound powder of jalap, the compound powder of ipecacuanha, and phenacetin, and has no tendency to recur. It is probably not due to the same poison as tropical dysentery.

These facts tend to show what I believe will eventually be proved—namely, that the real value of the tuberous-rooted Pelargonia as well as that of Monsonia ovata and Monsonia Burkei lies in their action on ulceration of the stomach and intestines, including that due to acute and chronic dysentery. If this is so we shall probably find that they also have an effect on the typhoid ulcer. This, I believe, is the case any time after about the eighteenth day of the disease. I have given the tinctura monsoniæ in three cases of this disease; twice towards the end of the third week and once in a very bad relapse in the fifth week, with blood in the stools. The first two cases were well by the twenty-first day. In the third case the patient slowly recovered; the hæmorrhage and diarrhœa ceased very soon after the second and last dose of 2 dr. The drug in the first cases appeared to induce constipation, which was, however, easily overcome by a large dose of olive oil. Dr. Foxwell of Birmingham used the tinctura pelargonii in a case of chronic diarrhœa with granular kidneys without any very distinct benefit and also without any ill-effects, which is perhaps worth recording as showing that the drug has no poisonous effect on diseased kidneys, the patient being, as he states, peculiarly susceptible to drugs. In fact, judging by the excessive doses given by the colonists, usually about a wineglassful of strong tincture made with brandy, it is almost certain that the plants contain no poisonous qualities even in quantity.

With the kind assistance of Mr. A. M. Cheyne, analytical chemist to Messrs. Burgoyne, Burbidges, and Co., an attempt was made to discover the active principle of the root of the Pelargonium used in the two cases recorded in this article. The quantity at our disposal was too small for a thorough analysis. We were, however, able to satisfy ourselves that

there was at any rate, no alkaloid present. The chief body found was a reddish amorphous powder, representing about 6 per cent. of the whole dried roots, this was soluble in rectified spirit and it gave the reactions typical of the class of vegetable bodies named tannins, being allied to that which occurs in cinchona, catechu, salix, &c. It is probable that the action of the drug depends on this substance. There was besides this another body somewhat similar, soluble in hot water, which was not precipitated by gelatin but otherwise gave reactions characteristic of the tannin group. A third body, soluble in ether and in rectified spirit at a temperature of 90° F. but insoluble or only slightly so in cold spirit, apparently a fatty acid, was also separated.

It has been my endeavour in writing these articles to place as much as possible any special knowledge gained at the disposal of my fellow practitioners, in the hope that some among them will be able to carry on the work of further proving or disproving the value of the drugs, which in my own hands have certainly yielded remarkable results. It is almost impossible for a private practitioner to complete single-handed the work necessary to prove absolutely the value or otherwise of a new series of drugs. He has to wait for opportunities for the trial of remedies in suitable cases; the mere necessities of existence compel him to be more or less a fixture wherever his lot may place him, few having the means at their disposal to shift quarters as required to parts where this disease or that is prevalent in order to test the value of some reputed remedy. On this account, therefore, I do not apologise for placing before my fellow practitioners what I am conscious is an incomplete investigation. There are several drugs in South Africa which are well worth the trouble of investigating—some, indeed, which, like the plants referred to here, promise to fill gaps at present existing in the Pharmacopœia. But the work of tracing the plants themselves and then proving their qualities is too prodigal of time and means to be undertaken by private practitioners, and unless some organised effort is made to rescue them from the oblivion in which they are at present sunk and to put them to the test of scientific experiment their virtues will remain unknown to the great bulk of the suffering humanity for whose benefit they were intended. In order that the medical profession may be able to obtain reliable preparations of the plants I have sent a good quantity of Monsonia ovata and Monsonia Burkei (or biflora) as well as some of the Pelargonium of uncertain species, also the Pelargonium triste to Messrs. Burgoyne, Burbidges, and Co., of 16, Coleman-street, London, E.C., who will make tinctures of the various sorts. I have been induced to do this in the first place because I know myself how extremely difficult it is to get reliable plants collected; and, secondly, by the fact that a certain firm in Port Elizabeth took the liberty about June last year of using extracts of my last article in THE LANCET without my knowledge as a means of advertising a certain preparation which they sold as "Tinctura monsoniæ." Seeing that the said papers could not have come to their knowledge till about the end of March and that in ordinary seasons the Monsonia ovata and Monsonia Burkei are at that time of the year either dead or in a withering condition it appears probable that the said preparation could not possibly have contained any active properties even if made from the species mentioned. There are several other species of Monsoniæ without any medicinal properties. Any experiments with the drug carried on under such circumstances would be most disappointing and very damaging to the reputation of a new drug and, perhaps, to that of the unfortunate medical man who had interested himself in bringing it before the profession. As a scientific worker I am quite prepared to find that other medical men may not have the same success as I have myself obtained with the plants in question; the only stipulation I would make is that their experiments shall be with preparations which I feel sure are what they claim to be. In this way only shall we be able to come to any definite conclusion.

For the benefit of those who may feel inclined to give the drugs a trial I may state that my experience leads me to believe (1) that they contain no poisonous properties; (2) that the Pelargonia are more suitable for ulceration of the stomach and upper portion of the intestinal tract and the Monsoniæ for that of the lower portion; and (3) that doses of two drachms are about the minimum for adults except perhaps in the case of typhoid fever, in which disease drachm doses of tinctura monsoniæ after or about the eighteenth day of the disease are sufficient, two or three such doses being all that is necessary, combined with or followed by some laxative, such as an ounce or so of olive oil. As to the Pelargonia in this disease I have had no experience.

In conclusion, I may add that in placing these observations before the medical profession I do so with a certain amount of diffidence and shall await their verdict on the drugs in question not without some anxiety, as no one is more conscious than myself of the uncertain action of drugs in the experience of different men in different parts of the world, and we all know how drugs in which some men have asserted their implicit faith have in the hands of others proved more or less disappointing. It is, however, only after a somewhat extended experience that I have formed any opinion on the plants in question, and I can only hope that they will prove themselves worthy of the faith I have placed in them in thus introducing them to my fellow practitioners.

Capetown.

# HÆMATURIA AS A SYMPTOM: METHODS EMPLOYED IN MAKING A DIFFERENTIAL DIAGNOSIS;

## WITH 19 CASES ILLUSTRATING POINTS OF INTEREST IN THE DIAGNOSIS OF RENAL AFFECTIONS CHARACTERISED BY THE PRESENCE OF BLOOD IN THE URINE.

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*(Concluded from p. 80.)*

### *2.—Passive Hyperæmia.*

(*a*) *Pressure on the renal veins.*—There are many lesions which may lead, by pressure upon the renal veins, to a passive hyperæmia, which reveals itself during life by the presence of albumin or of blood in the urine. I have seen instances where large abdominal tumours or aneurysms have caused obstruction to the exit of blood from the kidneys and so produced a hæmaturia. Sometimes a similar condition is brought about by pressure of a greatly-enlarged liver, by syphilitic new formations, or by malignant tumours in the neighbourhood of the spine. Such conditions require only to be mentioned here, as they seldom come under the treatment of the surgeon.

(*b*) *Torsion of the renal veins.*—I brought before the Clinical Society of London[1] two cases of moveable kidney in which hæmaturia was a prominent symptom as a consequence of interference with the venous flow from torsion of the renal veins. When the kidney was displaced in certain positions blood appeared in the urine and when the displacement was rectified by operation the symptoms disappeared and the hæmaturia ceased.

CASE 11. *Moveable kidney caused by a fall; symptoms—severe paroxysmal renal pain, sickness, and vomiting; history of hæmaturia, &c., simulating renal calculus; hæmaturia from hyperæmia; torsion of the renal vein.*—In this case the displacement of the kidney was caused by direct violence. Coincident with the accident the patient suffered pain in the renal region and at the same time he noticed a quantity of blood in the urine. The hæmaturia continued for several days and then gradually disappeared. Following the accident the pain in the lumbar region was so severe that he had to avoid work for over three weeks and after that time he required to be very careful not to over-exert himself, otherwise both the pain and the hæmaturia returned. This condition continued during four years. When he was at rest he had little or no discomfort, but severe suffering was readily brought on by any sudden movement of the body. Complete rest afforded marked relief to his suffering and if he avoided exercise of any kind the pain and hæmaturia seldom troubled him. The urine when free from blood was strictly normal, but when the hæmaturia came on the blood was intimately mixed with the urine, and the quantity of albumin present was in proportion to the hæmoglobin. No coagula, tube-casts, or histological elements of significance were found in the urine at any time. There was no

[1] Transactions of the Clinical Society of London, vol. xxx., p. 65.

suppression of urine, but during the attacks the urine was concentrated and when they passed off it was dilute and copious.

CASE 12. *Severe paroxysmal renal pain and hæmaturia; occasional blood-casts in the urine; moveable displaced kidney; torsion of the renal veins.*—In this case the patient suffered from severe paroxysmal renal pain and hæmaturia. These paroxysms of pain usually came on after exercise and lasted for several minutes at a time, while during the six months prior to admission he was almost constantly suffering from an aching pain in the left side. At the onset of the attacks of paroxysmal pain the urine was of a dark red colour and contained a large quantity of blood, but gradually the amount of blood diminished and the urine became of a brighter red. When the patient was kept strictly to bed he had no paroxysmal attacks and no hæmaturia or albuminuria. The presence of blood-casts in the urine was observed after the patient had been under observation for a considerable time. At first the case was considered to be one of renal calculus, but the presence of blood-casts in the urine suggested the source of hæmorrhage to be the renal tubules rather than the pelvis of the kidney. In this case the symptoms—namely, paroxysmal renal pain increased by exercise and relieved by rest, hæmaturia, and tenderness on palpation over the right renal region—all pointed to a calculus in the kidney; but the occasional presence of a few tube-casts and traces of albumin, without pus or blood, indicated that the morbid condition affected the tissue of the kidney, while the occasional appearance of blood-casts of the uriniferous tubules pointed to the origin of the hæmorrhage as being a marked but at the same time transitory passive hyperæmia from venous obstruction. At the operation a rotation of the kidney was found, the lower margin presented forward causing the ureters and blood-vessels to be coiled round one another, and so impeded the circulation of blood. As a consequence more or less passive hyperæmia was produced which varied in degree according to the precise position occupied by the kidney at the time. (See also Case 1.)

It is manifest that in such displacements of the kidney as those described the surgeon has to deal with a passive hyperæmia of the kidney due to local causes. In some instances the obstruction may be entirely venous, in others the arterial circulation may also be interfered with. When the efferent resistance is increased the veins and the venous radicals surrounding the uriniferous tubules will become distended. This increased resistance to the flow of blood from the kidney will lead to very considerable augmentation of the blood-pressure within the glomeruli. It is easy, therefore, to understand why blood-casts, blood corpuscles, and albumin appeared in the urine.

*(c) Reflex spasm of the arterioles.*—Examples of reflex inhibition of the functions of the kidney are numerous. For instance, complete suppression may follow the passage of a catheter and may be succeeded by a hæmaturia lasting for some days; then cases are seen of unilateral obstruction such as is produced by the presence of a calculus in one ureter causing complete anuria which may be more or less prolonged. Again, in cases of transitory hydronephrosis, when the obstruction on one side reaches a certain point the kidney on the opposite side may fail to act, even although the hydronephrosis continues to increase in size. In the *Glasgow Medical Journal* for March, 1896, p. 211, I reported a case of suppression of urine due to reflex spasm followed by the passage of urine containing blood. The case was one of intestinal obstruction. The patient complained of considerable pain in the region of the bladder and inability to urinate. No distension of the bladder could, however, be detected and on passing a catheter no urine escaped, although the instrument was clearly within the cavity of the viscus. Dry-cupping was applied over both kidneys and soon afterwards the patient passed 8 oz. of urine, which contained blood and a quantity of albumin larger than the blood accounted for; also some pus, but no tube-casts. A similar case to this I have recorded in the Transactions of the Clinical Society of London, vol. xxx., p. 78, Case 6. (See Case 14.)

The existence of a marked hyperæmia of the kidneys in cases of acute abdominal affections is not simply a coincidence—I should be almost disposed to regard it as a frequent occurrence and one which should be carefully looked for, and when indicated by prolonged suppression of urine the question of the relief of tension should be carefully considered. When the anuria is followed by the excretion of albuminous and bloody urine it indicates that there has been a serious disturbance to the circulation. The spasm is probably due to morbid motor impulses conveyed from the nerves proceeding from the solar plexus. Sudden relief of intra-abdominal pressure, as, for example, the removal of a large abdominal tumour or the evacuation of ascites fluid, may be followed by either an albuminuria or a hæmaturia, which seldom lasts, however, more than a few days.

### *3.—Inflammatory Hyperæmia.*

*(a) Nephritis, acute and chronic.*—In cases of acute nephritis, especially when the inflammation of the kidney is a sequela of typhoid fever, scarlet fever, pneumonia, or erysipelas, a considerable quantity of blood, and even blood-clots, may be found in the urine, which may be dirty rose-colour, dark-brown, or almost black. When the urine is very dark in colour it has been observed that the proportion between the colouring matter and the red blood corpuscles has been lost—that is to say, that the colouration of the urine is not fully accounted for by the corpuscles present. This anomaly is probably accounted for by the circumstance that the vessels of the kidney are under great inflammatory tension and probably the inflammatory process is associated with rapid disintegration of the red blood corpuscles and solution of the hæmoglobin. This explanation is supported by the fact that when such urines are examined frequently at different times of the day a true hæmaturia may be at one time discovered, at another a true hæmoglobinuria, while on a third occasion the conditions may be mixed.

Hæmaturia is not only observed during the acute stages of nephritis, but when the disease is chronic occasional outbursts of blood may be emitted during a period measured by hours or even days. These sudden appearances of blood are known in many instances to be traced to some exciting cause. For instance, in some cases of nephropathic anæmia it is only necessary to apply a simple vesicatory to cause the appearance of blood, in other cases cold is the determining cause, or a slight strain or fall on the buttock, or, again, in others the hæmaturia may be provoked by an intercurrent malady. Hence in all cases of hæmaturia arising in anæmic persons from slight causes the question of Bright's disease should be considered.

Time was when a disease such as acute tubular nephritis would be clearly placed under the care of the physician only, and the idea of seeking the aid of the surgeon under any circumstances would not for a moment have been thought of. The theoretical barrier which at one time clearly demarcated the line between medicine and surgery has been moved and the limits of the surgeon have advanced, so that at present it is difficult to say what belongs to the physician and what to the surgeon. The new horizon of surgical activity is far-reaching, and not infrequently new fields of action have been discovered as it were by accident. Take, for instance, the occasional successful treatment of tuberculous peritonitis by abdominal section, which has followed, what cannot but be regarded in the first instance as "random operations"; again, in cerebral surgery the gravest symptoms have in some instances disappeared after trephining, even although no special diseased condition has been discovered; so, also, in renal cases improvement has taken place after free incision of the kidney without any lesion being disclosed sufficient to account for the symptoms. To explain cases such as those referred to considerable speculation has been brought to bear on the subject and various theories have been offered to account for the benefit derived by the patient, but it is only through time and by larger experience that anything like a reliable opinion can be formed. It seems to me that in some of those cases the relief of internal tension may account for the benefit procured; the relief of tension within the peritoneal cavity, within the cranium, and within the firm fibrous capsule of the kidney may possibly explain the good effects of incision in a few instances, but not in all.

The attention of the profession was directed to the subject of "Albuminuria associated with Kidney Tension" in an article in THE LANCET of Jan. 4th, 1897, by Mr. Reginald Harrison. In his first contribution he makes the following observation: "Since the introduction and the more general adoption of direct exploration of the kidney through an incision from the loin or otherwise a certain proportion of cases have been met with where it failed to reveal any obvious cause for the symptom or symptoms which led to the adoption of the proceeding. It has, however, been frequently

noticed that such cases are often completely and permanently cured by what was done." He then cites three cases in illustration—the first an instance of post-scarlatinal nephritis; the second a nephritis from exposure to cold and damp; and the third case one of subacute nephritis following influenza; and in all of these he believed that considerable benefit was derived from the relief of renal tension by incision of the kidney. The details of the cases are not sufficiently complete for the reader to form an independent opinion from the facts stated, but from what I have seen of other cases I am willing to admit the justness of Mr. Harrison's conclusions as applied to the effects of increased vascular tension on the kidneys and their excretions. In corroboration of Mr. Harrison's view that inflammatory hyperæmia may lead to considerable pain in the kidney accompanied by albuminuria and relieved by incision the following cases may be quoted.

CASE 13. *Sudden suppression of urine, renal colic; hæmaturia; albuminuria; incision of the kidney followed by relief of pain and disappearance of albuminuria.*—In 1888, at the Western Infirmary, Glasgow, I saw a man who complained of severe pain in the loins, more severe, however, on the right side. It came on suddenly about two months previously and at the onset was accompanied by rigors and a sudden diminution in the quantity of urine. I ascertained from his medical attendant, the late Dr. John Moyes of Largs, that the urine at the beginning of the attack contained albumin, but no tube-casts were discovered. The specific gravity was from 1025 to 1030, but the daily quantity of urea was diminished. From 25 to 35 oz. of urine were passed in twenty-four hours. The patient did not complain of headache, nausea, or vomiting, and no other of the characteristic clinical features of nephritis was present, such as anasarca, effusion into serous cavities, anæmia or uræmic symptoms. When seen at the infirmary the urine contained a moderate quantity of albumin but no tube-casts and comparatively little deposit was thrown down on standing. There was a history of the passage of small oxalate of lime calculi and of occasional hæmaturia. While under observation he had several attacks of distinct renal colic, which led me to the conclusion that he was suffering from renal calculus, and he was advised to have an operation performed in the hospital. This he refused, but consented after some delay to have it done in private. On exposing the right kidney by a free incision in the loin the organ was seen to be enlarged, of a dark chocolate colour, and very tense. On examining the kidney with needles for the detection of a stone free bleeding occurred, and as no calculus could be discovered with the needles a free incision was made into the pelvis in order to explore with the finger. The bleeding was very free and the wound in the cortex had to be plugged with iodoform gauze. No calculus was found. I felt that I had made either an error in diagnosis or that my search had been imperfect and left the case with the belief that harm rather than good had been done by the operation, but to the satisfaction of the patient and myself he ceased to suffer any pain, the albuminuria disappeared entirely, and afterwards the patient enjoyed excellent health.

In this case, from the onset of the trouble till the time of the operation, albumin was constantly present and the quantity of urine remained considerably below the normal, but after incision the albumin disappeared and remained absent and the quantity of the urine increased. I have no doubt that in this case the relief of tension by the incision facilitated the renal circulation. Wet- or dry-cupping over the kidney may act in a somewhat similar way.

CASE 14. *Sudden suppression of urine; the pain at first diffuse, afterwards limited to the renal region; albuminuria; blood-casts; wet-cupping, with relief of urinary symptoms; inguinal hernia; operation; cure.*[2]—On May 20th, 1893, a patient, aged sixty-two years, came under observation on account of severe abdominal pain associated with sudden and almost complete suppression of urine, nausea, and vomiting; the pain at first was not limited to any particular spot, but was complained of all over the abdomen. When seen by me the pain had considerably diminished from what it was at the onset the previous day and physical examination of the abdomen did not cause much increase in suffering unless when firm pressure was made over the renal regions. The bowels had been moved freely and there was neither distension nor collapse of the abdomen; no hernia could be discovered. Only highly albuminous urine had been passed since the onset of the pain. The patient had an old stricture but the bladder was almost empty. The following table shows the state of the urine:—

TABLE I.—*Showing the Condition of the Urine before and after Suppression.*

| Date. | Quantity. | Specific gravity. | Reaction. | Remarks. |
|---|---|---|---|---|
| 1893. | | | | |
| May 20th, 10 A.M. | 20 oz. | 1016 | Acid | Slight trace of albumin. No blood. Pain set in at 11.30 A.M. and steadily increased till midnight. |
| May 20th, 11 P.M. | 3 oz. | 1018 | Acid | Very albuminous. Blood drawn off by catheter. |
| May 21st, 8 A.M. | 1 oz. | ? | — | Highly albuminous. Blood-casts. |
| May 21st, 10 P.M. | 4 oz. | 1025 | Acid | Ditto. |
| May 22nd, 10 A.M. | 3 oz. | 1028 | Acid | Ditto. |
| May 22nd, 7 P.M. | — | — | — | 14 oz. blood drawn off. |
| May 22nd, 11 P.M. | 6¼ oz. | 1020 | Acid | Highly albuminous blood-casts. |
| May 23rd, 2 A.M. | 7 oz. | 1018 | Acid | Ditto. |
| May 23rd, 6 A.M. | 10 oz. | 1018 | Acid | Less albumin and less tube-casts. |
| May 23rd, 11.30 A.M. | 12 oz. | 1016 | Acid | Albumin and blood much less. |
| May 23rd, 6 P.M. | 12 oz. | 1016 | Acid | Ditto. |

The temperature was never above 100·3° F., the pulse averaged 88 and was of good strength, and the respirations were 22. There were numerous blood-casts in the urine. The skin was moist. From the presence of blood-casts it was evident that the source of the albumin was in the kidneys and the suspicion was aroused as to the possibility of there being an acute tubular nephritis. Acute febrile diseases and their sequelæ were excluded and there was no reason to suspect cardiac, pulmonary, or cerebral causes of albuminuria. I applied wet-cupping to the loin over both kidneys and removed in all 14 oz. of blood at 7 P.M.; by 11 P.M. the patient had passed 6½ oz. of albuminous urine and during the same night 17 oz. of less albuminous urine were excreted and the pain in the loins subsided. The patient remained moderately well for a day (the 23rd) when the pain in the abdomen recurred, but this time it was more marked at the umbilicus and on the right side just over the middle of Poupart's ligament, where there was some increased resistance and dulness on percussion. This pain rapidly became more severe and the patient presented the appearance of a case of acute intestinal obstruction. A very careful examination was made of the abdomen, when the only abnormality to be detected was the dulness and increased resistance just referred to at the region of the right internal abdominal ring. Suspecting a small strangulated inguinal omental hernia I operated and thus gave relief. The patient made a good recovery and the albuminuria disappeared in three days.

Mr. Harrison's cases were clearly instances of acute parenchymatous nephritis and they raise the question how far in such maladies incision into the kidney may produce beneficial results. Parenchymatous nephritis is a disease characterised by scanty urine of high specific gravity which is very albuminous and contains blood and on standing deposits blood-casts and casts of the uriniferous tubules which may be hyaline, epithelial, or granular, and associated with these renal symptoms other conditions are generally present, such as serous effusion, as shown by hydrothorax, ascites, and œdema, while at the same time symptoms of so-called uræmic poisoning may develop. Post mortem the kidney is found to be enlarged and softened and the uriniferous tubules show very marked changes, such as swelling of the epithelium with a marked tendency to desquamation, so much so that the tubules may become blocked. At the same time fatty degeneration of the epithelial cells is present and blood is very commonly

[2] Transactions of the Clinical Society of London, vol. xxx., p. 78, Case 6.

present in the tubules. The blood probably escapes both from the mucous surface of the uriniferous tubules and from the glomeruli. During life, as I have observed, the extreme tension of the kidney is very marked. Considering that the expansion of the kidney is limited by a firm, fibrous capsule any marked increase of tension in the parenchyma of the organ must seriously interfere with the circulation of the blood and so impair the nutrition of the component elements of the organ and interfere with its function. This raises the question, when an acute parenchymatous nephritis leads to suppression of urine and impending death of the patient, Is not the surgeon justified in stepping in and, by incision of the engorged organ, relieving the tension, which is probably impairing the circulation of blood and the performance of function? Because the kidney is an internal organ, and therefore not so easily reached as external parts, should it be treated otherwise than more superficial parts when presenting practically the same conditions?

In chronic tubular and parenchymatous nephritis occasionally the urine is coloured of a rose-tint or even darker red, but in the intervals between the hæmaturiæ the urine shows evidence of renal disease by the presence of granular or hyaline tube-casts and small quantities of albumin, while the fluid itself is of a low specific gravity. The appearance of blood in chronic Bright's disease is well recognised, and a careful observer is not likely to overlook this form of hæmaturia or mistake it for any other, unless the renal disease happens to be complicated by the presence of other lesions. I met with a case four years ago where considerable difficulty was experienced in the early observations. The case was introduced as one of hæmaturia, which certainly had been more profuse than is usually seen in cases of chronic Bright's disease and was associated with painful and frequent micturition, so much so that the question of tumour of the bladder or vesical calculus was raised, but on cystoscopic examination the bladder was found to be typically healthy. The patient was kept at rest in bed and on milk diet, and within a few weeks the blood disappeared from the urine. The urine all along, however, contained traces of albumin, its specific gravity was seldom higher than 1008, and on standing a precipitate containing finely granular and hyaline tube-casts was detected by the microscope. Such cases require to be recognised by the surgeon but do not strictly come within his domain.

*(b) Tuberculous disease of the kidney.*—In this malady the urine presents very marked variations at the different stages of the malady. In the initial phases of the affection the presence of the virus induces a congested condition of the organ and hæmorrhages occur which are analogous to the hæmoptyses in the initial stages of pulmonary tuberculosis (see Cases 15 and 16). When the kidney parenchyma and the calyces become more seriously involved the characteristics of the urine are more distinct, but this is not always the case. The physical characters of the urine are in some instances such that one can with certainty state that the urinary tract is the seat of a tuberculous lesion, while in other cases the excretion may be to no appreciable extent altered from the normal. Before destructive processes commence within the renal pelvis or substance traces of albumin and small quantities of blood may be detected, but when the tuberculous deposit has commenced to break down and evacuate into the ureter the quantity of albumin is increased, the urine is liable after a time to become alkaline, and along with greater or less quantities of debris of renal tissue pus appears in considerable quantity.

The albuminuria differs from that of Bright's disease in that the urine is not clear but contains much mucus, is viscid, cloudy and opaque, and does not contain tube-casts. The deposit contains small caseous masses mixed with renal débris and on standing, although a considerable amount of pus may be precipitated, a certain quantity remains suspended and imparts a cloudy appearance to the fluid.

It is only in rare instances that profuse hæmaturia occurs in renal tuberculosis. Trautenroth [3] records the case of a woman, aged twenty-four years, who was the subject of pulmonary tuberculosis in its early stage, but who also suffered from profuse hæmorrhage from a tuberculous kidney which necessitated nephrectomy. The pelvis of the kidney was filled with coagulated blood and upon one of the papillæ a considerable ulcer was discovered. The parenchyma of the kidney was the seat of a diffuse tuberculosis. The urine before the operation was found to contain tubercle bacilli; the patient made a good recovery. Routier [4] records a somewhat similar case where the right kidney was the seat of a large tuberculous ulceration. Severe hæmorrhage occurred and continued during seventeen days, associated with renal colic; on making pressure over the right kidney blood was seen to escape from the right ureter by the cystoscope. The kidney was removed and the patient made a good recovery.

As the disease advances the odour of the urine as a rule becomes more and more offensive; the fluid deposits large quantities of mucus and triple phosphates, and on examination is found to be highly albuminous. Occasionally while the urine is pale and of low specific gravity there may be evidences of retention on the diseased side, as shown by increase in the renal swelling, with perhaps indistinct fluctuation and pain accompanied by general constitutional disturbance, or there may be complete suppression, death being ushered in by uræmic symptoms.

In addition to the diagnostic points already indicated the detection of the tubercle bacillus in the urinary débris is of great value. The method which I have employed most successfully is as follows. Allow a quantity of urine to stand in a conical glass in a cold place, for not more than six hours and from the deposit select a small quantity of débris; place it in a glass of ¾ per cent. salt solution. Having placed a small fragment of the débris on a clean cover-glass it should be spread out into a thin layer by pressing another cover-glass against it between the finger and thumb. On separating the cover-glasses a thin film of débris will be found adhering to each. The glasses must be air-dried and then the films may be more firmly fixed by drying over a spirit lamp or in front of the fire. The cover-glasses are then placed in or, still better, floated upon (with film side downwards) a solution of anilin magenta or a staining fluid of gentian-violet. When the film has become sufficiently stained the colour may be abstracted from all structures other than the tubercle bacilli by passing the cover-glass through a 25 per cent. solution of nitric acid. The action of the acid may be arrested by carefully washing the specimen in pure water. When examining the urinary débris for tubercle bacilli it is necessary in most cases to prepare at least half a dozen specimens. Should bacilli be present they will be recognised by a magnifying power of 750 diameters as minute rod-shaped bodies, coloured according to the nature of the staining fluid employed. They are from three to seven micro-millimetres long, may be straight, but are more frequently curved or bent upon themselves at an obtuse angle, are frequently beaded, and occur in bundles or singly. From the urine the micro-organisms are not easily cultivated, as putrefactive bacteria contaminate the culture and destroy the specific bacilli. Koch, however, states that he has succeeded in cultivating tubercle bacilli from cases of tuberculous pyelitis.

In some instances the bacilli in the urine are so few in number that it is difficult or almost impossible to discover them simply by the microscope; in such instances inoculation experiments may help to clear up the diagnosis. When tuberculous urine is injected subcutaneously or into the peritoneal cavity of rabbits it produces a typical tuberculosis, while normal urine when aseptic becomes absorbed without producing any evil effect, or when septic may produce a suppurative peritonitis. If, however, the experiment is performed with care healthy urine produces a negative result, but if the urine contains tubercle bacilli or their spores acute miliary tuberculosis is developed in the course of a few weeks when the injection is made into the peritoneum, or if the urine is placed underneath the skin a hard tuberculous nodule is formed.

Besides the detection of the tubercle bacillus it is necessary to determine whether the disease is on one or both sides. I have several times had occasion to examine by ureteral catheterisation cases of tuberculous pyelitis in which it was considered of importance to determine the extent to which the disease had involved one or both kidneys. Catheterisation can only determine the organ to which the tuberculous disease is limited, it cannot indicate the extent of the tuberculous lesion in the affected organ, but to make sure that one kidney was free from disease was at the time I first employed catheterisation considered to be a point of importance. The first time I succeeded in doing this was in 1886, when I

[3] Centralblatt für Chirurgie, 1896, No. 16.

[4] Bulletin et Mémoires de la Société de Chirurgie de Paris, vol. xxi., p. 148.

examined a case and clearly showed that the tuberculous lesion was limited to one kidney. A woman, aged twenty-six years, who was admitted into the Glasgow Royal Infirmary suffering from symptoms of tuberculous pyelitis of the left kidney, was first under the care of my colleague, Dr. Alexander Robertson, who asked me to make the examination. Subsequently the patient was transferred to the surgical ward, under the care of Dr. Robertson's corresponding surgeon, Mr. H. E. Clark, who successfully operated by lumbar nephrectomy. Previously to making the examination by the ureteral catheters it was noted that the urine was decidedly below the normal in quantity, that it had a specific gravity of from 1015 to 1020, and that it contained albumin and pus, the former in larger quantity than could be accounted for by the amount of the latter. The examination of the urine separately from the two kidneys gave the following results:—

TABLE II.—*Showing the Characters of the Urine from each Kidney.*

| | Right kidney. | Left kidney. |
|---|---|---|
| Appearance ... ... ... | Clear and pale in colour; on standing for 6 hours only a deposit of mucus and a few epithelial cells. | Dark straw colour: clouds on standing for 6 hours, with an abundant deposit. |
| Reaction ... ... ... | Neutral. | Alkaline. |
| Albumin ... ... ... | Very slight trace. | 1·805 per cent. |
| Hæmoglobin ... ... | None. | 1 in 8000. |
| Tube-casts ... ... | None. | None. |
| Microscopic examination ... ... ... | Slight deposit of epithelium and mucus; no blood, pus, or tube-casts. | Abundant deposit of pus, with triple phosphates; a few blood corpuscles and spheroidal epithelium; no tube-casts. |

No tubercle bacilli could be discovered in the deposit from the urine, but after the kidney was removed it was found to be characteristically tuberculous. The patient made a good recovery.

CASE 15. *Profuse hæmaturia with slight pain in the left kidney recurring thrice; no other deposit in the urine and no swelling in the lumbar region; apparent recovery for two years, followed by a relapse of the symptoms and a swelling in the left lumbar region; muco-purulent deposit in the urine and tubercle bacilli; no vesical irritation.*—A young woman, aged eighteen years, consulted me in September, 1893, on account of a profuse hæmaturia which had occurred a fortnight previously. No reason could be assigned for the onset of the bleeding and it was unaccompanied by any pain over and above a sense of fulness and weight in the left renal region. A careful examination of the urine failed to reveal any abnormal constituents beyond a small trace of blood, but the hæmaturia had practically disappeared at the time I saw the patient. Three months after this first hæmorrhage a second attack, not so profuse or so prolonged as the first, occurred and two months thereafter a third attack, all without any concomitant symptoms. On account of the difficulty in forming a diagnosis an examination of the bladder was made during the last attack and blood was seen issuing from the left ureter in a distinct cloud; it was therefore evident that the hæmorrhage was of renal origin, but as there were no symptoms pointing to the nature of the malady complete rest in bed was enjoined and the patient made what was regarded at the time as a complete recovery. Two years after the first hæmorrhage a fourth hæmorrhage occurred; this was associated with considerable pain in the left lumbar region and a distinct swelling could be made out by palpation. Examination of the urine two weeks after the hæmorrhage occurred showed it to contain a deposit of muco-purulent material as well as blood corpuscles, and on microscopic examination tubercle bacilli were discovered. Still there were no symptoms present indicating any irritation of the bladder. The temperature was now elevated for the first time and the patient suffered from night-sweats, but there was no emaciation, loss of appetite or serious constitutional disturbance.

This case illustrates to some extent the analogy between tuberculous lesions in the kidney and those in the lungs. It is by no means an uncommon occurrence to meet with cases of profuse and frequent hæmoptyses long prior to the development of physical signs of tuberculous phthisis, so also in renal tuberculosis hæmaturia may be present as a premonitory symptom of tuberculous disease long antecedent to the development of a gross renal lesion.

CASE 16. *Hæmaturia thirteen years previously to admission and again nine years after the first bleeding; large tuberculous pyonephrosis.*—A man, aged thirty-nine years, was admitted to the Glasgow Royal Infirmary on April 28th, 1896, complaining of pain in the region of the right kidney. The patient's first trouble in connexion with the urine dated back to thirteen years before, when he had a slight attack of hæmaturia accompanied by pain over the right kidney, but these symptoms passed off in a few days. The patient had been in the infirmary in February, 1896, with hæmaturia. He first noticed blood regularly present in his urine in November, 1895. He, however, was able to continue at work until the end of January, when he came into the hospital; at that time the hæmaturia was very considerable. He said that it was only three weeks previously to admission that he noticed anything like severe pain in the right side and since the pain came on he had not noticed any blood in the urine. On examination a very distinct fulness was found in the right lumbar region. The whole space between the liver and the crest of the ilium was dull on percussion and on pressure considerable tenderness was produced. The thoracic organs and the other abdominal organs were normal, so also was the bladder. The urine contained a considerable quantity of pus and some blood and tubercle bacilli were present. The left kidney was healthy. On operation a large tuberculous kidney was discovered on the right side; it was scraped and evacuated.

In this case it is difficult to say whether or not the first hæmaturia thirteen years previously to admission was due to a tuberculous lesion, but the circumstances that nothing else was discovered to cause bleeding and that no hæmorrhage has occurred since the operation rather support the idea that it was a true case of tuberculous hæmorrhage from the beginning. Such cases as the two just recorded are uncommon and are worthy of consideration.

*(c) Cystic degeneration and hydatids.*—While in the early stage of cystic degeneration of the kidney urinary symptoms are generally absent, as a rule as the disease advances the urine has been found to contain albumin and finely or coarsely granular tube-casts; hæmaturia has also been noted in a considerable number of the recorded cases—I have found it in about one-fourth of the cases which I have tabulated. Sometimes the hæmaturia has been profuse, in other instances small in amount. The fact just stated differs from what is observed by Dickinson, who says, speaking of the urine: "It is characterised in most cases by the frequent admixture of blood, often so copious as to call for styptics; of 16 cases in which symptoms were present hæmaturia was prominent in 11; in some it largely contributed to death by the exhaustion it caused; in others it gave trouble through the formation of coagula." In the case about to be described the urine was never free from blood, the persistent and sometimes considerable hæmorrhages led me for some time to suspect malignant tumour of the left kidney. The character of the hæmorrhage and the circumstance that it was associated with a swelling which was steadily increasing supported this view; while, on the other hand, the fact that subsequently the right kidney became enlarged and was painful—taken in conjunction with the discovery that the hæmorrhage was from the left kidney only and that there was evidence of chronic tubular nephritis—made me doubt the accuracy of my first diagnosis of malignant tumour and inclined me towards that of cystic degeneration. The presence of hypertrophy of the left ventricle and increased arterial tension supported this view.

CASE 17. *Cystic degeneration of both kidneys; persistent renal pain, anæmia, and emaciation; hæmaturia from the left kidney only; albuminuria; granular and hyaline tube-casts; physical signs of cystic kidney on both sides; hypertrophy of the heart; death after five years from uræmia.*—A male, aged forty-six years, consulted me in 1881 when he complained of pain in both loins from which he had been suffering for the previous eighteen months. He complained of loss of appetite and occasional nausea after taking food, also headaches and giddiness; but what alarmed him most was the persistent renal pain and hæmaturia. The latter symptom had been present for seven months. At first the

quantity of blood was small in amount, being only sufficient to tinge the urine, and when the urine was allowed to stand a red deposit was thrown down which did not amount to more than from ½ to 1 per cent. in volume. When the patient had been under observation for some time a careful examination of the urine was made in order to determine the relative proportion between the amount of hæmoglobin and the quantity of albumin present in the urine, with the following results:—

TABLE III.—*Showing Analysis of the Urine on Various Occasions, with Special Reference to the amounts of Hæmoglobin and Albumin.*

| Date. | Quantity of hæmoglobin. | Quantity of albumin. | Specific gravity. | Quantity of urine in twenty-four hours. |
|---|---|---|---|---|
| | Per cent. | Per cent. | | oz. |
| 1881: June 7th ... ... ... ... | 0·101 | 0·237 | 1011 | 60 |
| ,, ,, 8th ... ... ... ... | 0·097 | 0·318 | 1010 | 62 |
| ,, ,, 9th ... ... ... ... | 0·072 | 0·201 | 1018 | 31 |
| ,, Aug. 20th ... ... ... ... | 0·123 | 0·310 | 1018 | 32 |
| ,, ,, 21st ... ... ... ... | 0·124 | 0·379 | 1016 | 76 |
| ,, ,, 22nd ... ... ... ... | 0·017 | 0·147 | 1005 | 78 |
| ,, Dec. 5th ... ... ... ... | 0·071 | 0·239 | 1005 | 78 |
| ,, ,, 6th ... ... ... ... | 0·092 | 0·210 | 1003 | 100 |
| ,, ,, 8th ... ... ... ... | 0·100 | 0·307 | 1010 | 70 |
| 1882: Feb. 11th ... ... ... ... | 0·131 | 0·370 | 1018 | 34 |
| ,, ,, 13th ... ... ... ... | 0·127 | 0·206 | 1010 | 50 |
| ,, ,, 17th ... ... ... ... | 0·130 | 0·179 | 1018 | 31 |
| **Average of twelve examinations** | 0·099 | 0·358 | 1010 | 58 |

When albuminuria is due simply to the presence of blood the ratio of albumin to hæmoglobin is as 1 is to 1·6. As shown by the foregoing table in this case the amount of albumin was relatively greater—namely, as 358 is to 99 or, to state it more simply, as 3·6 is to 1—that is to say, the whole of the albumin present in the urine was not accounted for by the presence of blood; indeed, not more than a fifth part of it could be properly attributed to the hæmaturia. Repeated microscopic examinations of the urine failed to show the presence of blood-casts, but on almost all occasions finely granular and hyaline tube-casts were found together with free blood corpuscles, a few leucocytes, and some epithelial cells. The urine from both ureters was examined separately at three different times and it is a fact worthy of note that while on all occasions that from the left kidney contained blood the urine from the right kidney was free from it.

TABLE IV.—*During 1884: Examination of the Urine from the Two Ureters Separately.**

| —— | Right ureter. | Left ureter. |
|---|---|---|
| Appearance ... ... | Pale straw-colour, clear; on standing for eight hours slight deposit of epithelium and a little mucus. | — |
| Hæmoglobin ... ... | None. | 1 in 6000. |
| Reaction ... ... ... | Neutral. | Neutral. |
| Albumin ... ... ... | A trace. | Larger in amount than from right kidney. |
| Tube-casts ... ... ... | Hyaline and granular. | Hyaline and granular. |
| Microscopic examination ... ... ... | Slight deposit of epithelium and mucus, a few tube-casts, no blood or pus. | Deposit the same as from right kidney, with red blood corpuscles added. |

* Silbermann's method of compressing the ureters was employed.

During the time the patient was under observation the kidneys slowly and steadily increased in size and at no time either suddenly increased or diminished even although the quantity of urine varied greatly in amount. The post-mortem report is as follows. The kidneys weighed 28 oz. and were each converted into a large conglomeration of cysts of varying size and colour and so closely packed together that it was difficult to detect any renal tissue with the naked eye, although with the microscope abundance of tubules and glomeruli could be seen. In both kidneys there was also evidence of chronic tubular and interstitial nephritis. The only difference between the right kidney and the left one was that whereas the latter was somewhat the larger the cysts in the former were not so numerous and were more deeply pigmented. The specimen is in the Royal Infirmary Museum, Series vii., No. 89.

### 4.—*Tumours of the Kidney.*

Hæmaturia is the most important and significant symptom of malignant disease, especially cancer of the kidney, and tumours of the kidney are nearly always malignant. It is true various forms of fibromata have been recorded and occasionally an osteoma, a lipoma, an adenoma, and cases of a papilloma have been published from time to time, but they are very rare. In tumours of the kidney hæmaturia takes place in about 25 per cent. of cases in children; these are always, or almost always, sarcomata. In adults about 20 per cent. of the cases of malignant disease present hæmaturia as a prominent symptom; these are divided between the sarcomata and the carcinomata. In carcinomata alone 75 per cent. of the cases present hæmaturia as a prominent symptom. Hæmaturia of malignant disease is rarely severe at its early stage, although cases have been recorded in which profuse bleeding occurred. As a rule, however, it is only as the disease advances that the loss of blood attains to such an amount as to form a distinct deposit. When the hæmorrhage has commenced it is more profuse, is steadily progressive, and less transient than when due to other causes, and is generally spontaneous and continuous, although at intervals liable to aggravation. Clots frequently form and may cause obstruction to the escape of urine through the ureter, bladder, or urethra (Case 8). The presence of organised constituents in the urine, such as epithelium, tube-casts, &c., is of comparatively little diagnostic value, although by some observers considerable importance has been attached to the presence of so-called "cancer cells." As a matter of fact, however, cells resembling those of a cancerous growth seldom find their way from the kidney to the bladder; in this opinion I entirely agree with Dickinson, who says: "I have met with not a few in which a discharge of cells of epithelial type, together with blood, has been supposed to indicate cancer of the kidney, but not with one in which this supposition has been verified. If I am told that such a one is passing 'cancer cells' in the urine I conclude that, whatever his disease may be, it is not cancer of the kidney. A deposit consisting of blood-corpuscles, mixed, if with anything, with indefinite sanguinolent material, and that constant, during repose as well as under exercise, is a sign in this respect of more meaning. It is to be borne in mind that a fungating tumour of the kidney is less often cancer than sarcoma, the cells of which, associated as they are with connective tissue, are not to be easily and abundantly shed, while even should they reach the urine they are, at least in the small-celled varieties which are the more numerous, too small to attract attention when confused with red and white blood corpuscles."

In desquamative catarrh of a mucous surface the epithelial cells are shed in large numbers and mingle with the secretion. From what has been written by some observers one would be led to the conclusion that they believed that this process of separation was all that happened to the epithelial cells and that these were thrown off from the mucous surface in much the same form as they presented during health. This is not so. When a mucous membrane is inflamed the epithelium becomes granular and undergoes a process of softening so that the cells are capable of taking on the most varied forms and of throwing out prolongations. This is most marked when the superficial cells are rapidly thrown off and being replaced quickly by means of regenerative multiplication of the deeper cells. Hence the catarrhal secretion may contain epithelium in all stages of development, from round cells resembling pus corpuscles to caudate cells similar in appearance to those described as being characteristic of exudation from the renal pelvis. I do not deny that, for example, in vesical catarrh groups of tessellated epithelial cells of circular form are sometimes significant and that in pyelitis, flattened, laminated, caudate epithelial cells may be often more abundantly present in the

urine than when the renal pelvis is not involved in the inflammation, but the point I desire to impress is that the diagnostic significance of individual loose cells is of no more value than is the observation of single epithelial cells removed from a tumour. To diagnose pyelitis from the appearance of the cells in the urine is no more justifiable than the diagnosis of a cancer from a few isolated cells detached from a growth. If the mucous membrane was shed in small shreds or in casts, with the epithelium adhering, then the microscope might aid in the diagnosis; but when the histological relationships of the cells are lost so also is their significance. The presence of loose epithelial cells does not indicate the nature of the renal affection, but if small portions of the neoplasm are discovered in the urine their examination under the microscope will clear up the diagnosis.

In malignant disease of the kidney when the tumour is limited to the substance of the organ the urine is usually perfectly natural, but when the neoplasm has invaded the pelvis blood-casts, epithelium, and portions of the growth may appear in the excretion. In the early stage of the disease, however, even before any abnormal constituent can be detected in the urine, the patient may experience considerable difficulty in micturition, probably the result of a reflex nervous excitement. In some cases of malignant disease the hæmaturia is a delayed symptom. This is especially so in cases of sarcomata. An enormous, soft, round-celled sarcoma may exist and develop without hæmaturia or any other disturbance in the secretion indicating the locality of the disease, as, for example, in the following case.

CASE 18. *Large, rapidly growing, round-celled sarcoma of the left kidney without any abnormality in the urine or symptoms pointing to renal tumour; physical signs, however, characteristic.*—A child, aged three years, was admitted to the Glasgow Royal Infirmary on April 2nd, 1897. The patient was pale and emaciated and the left side of the abdomen was occupied by a smooth, rounded swelling, highly elastic but non-fluctuant in the lumbar region, and passing forward to within one and a half inches of the umbilicus. The swelling could be distinctly felt extending between the margin of the ribs and the bones of the pelvis and over the entire area of increased resistance a dull note was elicited on percussion. The swelling was firmly fixed and the patient did not complain of pain or discomfort further than could be explained by the pressure of the new growth. The history of the case showed that the swelling was first noticed three months previously to admission, but at that time it was extremely small in size, so that as far as it is known the tumour was of not more than two and a half months' or three months' growth. No abnormal constituents were found in the urine at any time nor did the patient complain of any vesical irritation. Operation revealed the presence of a huge round-celled sarcoma which was removed by abdominal nephrectomy.

I have seen two other cases of malignant disease of the kidney—one a spindle-celled sarcoma, the other a carcinoma where hæmaturia was noted to have been present during the whole course of the case.

Sometimes the diagnosis of malignant disease is rendered difficult by the presence of a calculus in the diseased kidney. The following case I brought before the Glasgow Pathological and Clinical Society in 1895.

CASE 19. *Renal calculus with symptoms of ten years' duration; pain in the loin; repeated hæmaturia with cessation of symptoms for considerable periods after treatment by rest, thereafter followed by symptoms pointing to malignant disease; calculus and epithelioma of the left kidney.*—A man, aged fifty-six years, was seen by me first on Dec. 12th, 1884, and at that time he gave a history of his illness which clearly pointed to renal calculus in the left kidney. He said that about ten years ago he began to suffer from a dull, aching pain in the loin accompanied by a sense of weight on the affected side when he was occupied at his work, that of a marine engineer. The pain was inconstant but as a rule it was aggravated by any sudden movements of the body, such as jumping, running, or sudden change of position in bed. The pain also varied with posture; when he lay upon his left side the pain was relieved, while if he stood, or lay upon his right side it was increased. At this time the abnormal sensations were strictly limited to the left side. Within six months of the onset of the pain he commenced to suffer from frequent micturition, with pain in the bladder, and at the same time he noticed that the urine contained small quantities of blood. The bleeding was usually accompanied by pain and as a rule it was increased by movements of the body, but sometimes several hours or even days might elapse between the exertion to which it was referred and the appearance of the blood in the urine. The blood was intimately mixed with the urine when passed, but if the urine was allowed to stand for a few hours the blood corpuscles gradually separated as a deposit and left the supernatant urine clear. At this time the urine was acid. The patient was a very intelligent man and I could rely thoroughly upon his statements. He said that the medical men whom he had consulted told him that he suffered from a stone in the kidney and that they had reported his urine to be free from albumin and pus. The symptoms of renal calculus, after being in abeyance for three years, recurred in 1878. When I saw him in 1884 he was suffering very severely from hæmaturia, together with sharp pain in the left renal region. Considering the history above recorded the diagnosis seemed to me to lie between renal calculus and a stone in the bladder; the general course of the hæmaturia was strongly in favour of the hæmorrhages being renal rather than vesical. I ordered the patient to take rest for a week and at the end of that time the pain was greatly relieved and the hæmorrhage had almost entirely disappeared, but the urine on examination was found to contain not only blood but also a considerable quantity of albumin and a few tube-casts; these were present in acid urine and could be readily separated by a centrifugal machine, but the tube-casts did not deposit readily, and if the urine became alkaline they disappeared, probably by solution. The question placed before me by the patient was whether his case was a suitable one for operation or not, and the patient came to me for the special purpose of being informed whether one or both kidneys was diseased, as he had been told by his medical attendant that the urine from each kidney could be examined separately. After some trouble I succeeded in catheterising the ureters and while I found that all the blood came from the left kidney the urine from the right kidney contained both albumin and tube-casts. I consequently advised the patient against an operation, but prescribed what I considered suitable treatment for his relief. At this time there was no evidence of tumour in the renal region. The patient was directed to take as much rest as possible and instructions were given him as to his general health. I did not see the patient again until June, 1885, when he presented himself to report progress. His general appearance was markedly improved and he told me that for the previous three months he had not observed any blood in the urine, although he suffered from occasional pains in the left renal region. These pains were, however, less frequent and less severe than in the latter months of 1884; still there were no signs of swelling in the loin. The next time I saw the patient was in November, 1886, when I observed a great change in his appearance. He was greatly emaciated, pale, and found a difficulty in walking even a short distance. He told me that he had almost no appetite and frequently when he took food it was rejected. About four months previously to his last visit to me he had a very severe and prolonged attack of hæmaturia and sometimes clots were formed which caused obstruction to the escape of the urine from the ureter or from the bladder. The pain was also more intense and more constant, and instead of being dull or paroxysmal, as in former times, it was now more lacerating and the area of distribution of the pain was greater; instead of being limited to the hypogastrium or the lumbar region it now extended down the left thigh, across the abdomen, and to the left shoulder. The urine in addition to tube-casts deposited large epithelial cells which were bound together more or less by blood-clot. Now for the first time a distinct swelling was observed in the left loin, the tumour could be distinctly felt through the lumbar muscles, and, with one hand in the lumbar region and the other in front, a smooth, solid swelling of about twice the size of an ordinary kidney could be made out. The tumour was firmly fixed and painful on pressure, the percussion in the loin was dull as far as four and a half inches from the spine, and this percussion was not varied by the position of the patient.

The two cases last described are exceptional, the one in the circumstance that a huge malignant tumour developed without giving rise to any characteristic symptoms, and the second in that a renal calculus in the pelvis of the kidney by producing local irritation probably induced the formation

of an epithelioma. In the great majority of patients suffering from tumour of the kidney the first warning which the patient receives of the presence of disease is a profuse hæmaturia (see Case 8), sometimes induced by slight violence but in most instances coming on spontaneously; probably the most profuse renal hæmaturiæ are those met with in cases of malignant disease.

Glasgow.

# A CASE OF INTRA-THORACIC TUMOUR WITH SECONDARY GROWTHS IN THE BRAIN AND ALTERNATE PARALYSIS.

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THE following case appears to be worthy of record as an example of a somewhat curious combination of conditions giving rise to crossed paralysis. I have to thank Dr. Mitchell Bruce, under whose care the patient was, for his kind permission to publish these notes.

A married woman, forty-three years of age, was admitted to Charing-cross Hospital on April 7th, 1897, suffering from cough and weakness of the left side of the body and the right side of the face. Her mental condition rendered it difficult to obtain a satisfactory history of her illness, but from her own account, supplemented by that of her friends, it appeared that she had never been quite well since an attack of "influenza" in 1892 and that she had suffered from cough since Christmas, 1896. She had been actually confined to her bed since Feb. 22nd, 1897, when she had an attack of congestion of the lungs. A fortnight after this (March 8th) her mouth became drawn over to one side and she was unable to move her left arm. There was at the same time loss of feeling in this limb, as was shown as regards thermo-anæsthesia by her holding in her hand an egg which had just been taken out of boiling water. This attack seems to have come on suddenly, as she was found in this condition by her husband, who had left her in her usual health a few hours previously. A week later (March 15th) she was found on the floor unconscious, having apparently fallen out of bed. She was supposed at the time to have fainted as she quickly recovered consciousness, but the paralysis was found to have increased in the affected arm and the left leg also was now partially paralysed. No further sensory disturbance was noticed and the original loss of sensation had by this time passed off. With regard to her previous history little could be ascertained. She had had four children, the last ten years previously, and they were all alive and well. In the last five years she had had three miscarriages. After the death of the patient her husband stated that he believed that she had undergone an operation, apparently gynæcological, in either Guy's Hospital or the Middlesex Hospital, but as he could not fix the date of this even approximately no record of such an operation could be obtained.

On admission to hospital the patient appeared to be a fairly-nourished woman, but looked prematurely aged. Her face was flushed and her expression was melancholy and anxious. While at rest the left corner of the mouth was higher than the right and on attempting to smile or to show her teeth the lower part of the face on the right moved less than the other side. The pupils were equal and reacted normally to light and accommodation. The tongue was protruded with great difficulty and tended slightly to the right side. Her mental condition appeared to be dull and her memory was impaired. Her speech was indistinct and hesitating. She had no difficulty with any special letters and could repeat words at dictation quite correctly but not write them. Told to write "Come here," she put "Mer"; for "To see" she put part of her name and address. She could not read correctly and left off reading a simple book because she could not understand it. In the left arm the grasp and other movements were distinctly weaker than in the right limb, but the range of movement was good on both sides. No sensory defect was discoverable in either arm nor could any deep reflexes be obtained. In the legs all movements of the left extremity appeared to be sluggish and strengthless, but sensation seemed everywhere to be normal. The knee-jerks were equal and not markedly increased. The plantar reflex was more marked on the left side and here there was also ankle clonus. The patient passed urine under her, apparently from mental defect. This had not occurred before admission. In the chest movements of respiration were good—36 to the minute—and the apex beat was in the normal position. The first sound of the heart was short and sharp, but there was no bruit audible. The pulse was regular, the arteries were cord-like and slightly tortuous. Behind there was dulness on percussion at the right base extending upwards nearly to the angle of the scapula, with absence of breath sounds and diminished vocal resonance and fremitus over the dull area. The abdomen was rather full with well-marked lineæ albicantes; nothing abnormal could be made out on palpation. The urine was acid, of specific gravity 1024, and did not contain albumin or sugar or any casts. The optic discs were normal. The patient's mental condition gradually improved throughout the following week and the weakness of the limbs appeared also to diminish. She was treated with an acid mixture containing some arsenic and strychnine. On the 14th she complained of indigestion with some pain in the epigastrium and left iliac region. The mixture was discontinued and a medicine containing iodide of potassium was given on account of the history of miscarriages. On the 16th there was pain in the left supra-clavicular region with slight fulness and tenderness, and on the following day the left shoulder, including this region and the upper arm, were swollen and œdematous. The œdema gradually extended to the forearm and back of the left hand, and pitting could be obtained over both clavicles and the whole of the left side of the thorax. There was no œdema of the legs or back and no ascites. The breath sounds were very harsh over the whole front of the chest and were bronchial in character over the upper lobe of the left lung. There was impaired resonance on percussion over both upper lobes, especially the left; the physical signs at the right base still continued and there was now a very similar condition found at the left base also. Enlarged veins were visible over both supra-clavicular regions and the skin here appeared to be slightly reddened. The patient still complained of indigestion and the action of the heart became slightly irregular. During the next few days the œdema of the arm diminished to some extent, apparently owing to the establishment of a collateral circulation, as the enlargement of superficial veins became more marked. On the 23rd the patient complained of pain in the calves of both legs and there was some œdema on the right side over the gastrocnemius. There were also dyspnœa with slight cough and considerable epigastric pain and flatulence. The latter was relieved by bismuth mixture and the patient from this time forward was given scarcely any solid food. On the next day an erythematous rash appeared on the abdomen, distributed in streaks. There was still some pain in the epigastrium and the recti here were tense and resistant. The right forearm was now also œdematous and a cord-like thrombosed vein could be felt just below the internal condyle of the humerus; a few days later there was also thrombosis of the enlarged superficial veins on the chest and the upper part of the abdomen. On the 29th a distinct friction sound was audible over the base of the right lung behind and there was ægophony on both sides in the inter-scapular region. The dyspnœa was now very marked and the patient was in considerable distress. The right side of the chest was therefore aspirated and 36 oz. of slightly turbid yellow fluid were withdrawn. This was found microscopically to contain a certain number of leucocytes and some large (epithelial?) cells, the latter often aggregated into rounded masses. The breathing improved in consequence of the operation, but the œdema of the arms continued and that of the legs increased. The enlarged veins on the chest and abdomen became still more prominent and the current in them appeared to oscillate, flowing equally in both directions from above and from below. On May 5th the fluid in the right pleura had reaccumulated and was again withdrawn with the aspirator. There was now œdema of the back and a tendency to cyanosis. A mass could be felt in the epigastric and umbilical regions lying somewhat deep in the abdomen and the liver was palpable below the costal margin. The patient's condition gradually became worse; she was restless and slept badly. An offensive vaginal discharge appeared, but

on examination nothing to account for it was found. Her appetite was bad and she complained of a foul taste in the mouth; there was still considerable dyspnœa. The left pleural cavity was accordingly aspirated, but little improvement resulted, and the patient died on May 18th. On the day before her death the stools were noticed to be very black in colour, suggesting hæmorrhage.

*Necropsy.*—At the post-mortem examination, made by Dr. William Hunter, the glands in the mesentery and along the aorta were found to be much enlarged and the lymphatics of the pelvis were dilated so as to resemble the condition found in filariasis. The left ovarian and renal veins and the right common iliac vein were thrombosed and impervious, the liver was fatty, the kidneys were normal, and the spleen was shrunken and atrophied; the intestines contained altered blood but were themselves healthy. On the lesser curvature of the stomach was an ulcer 1½ in. in diameter, cleanly punched out and circular in shape; the viscus was partially filled with altered blood. The vagina and body of the uterus were normal; the cervical canal was inflamed and contained a sanguineous discharge. No trace of any operation on these parts could be found. The right pleural cavity contained over two pints of blood-stained serum; both the visceral and parietal layers of pleura were studded with small nodules of vascular new growth. The heart was healthy; the pericardium contained several ounces of bluish serum. The lower lobe of the left lung was in a condition of hypostatic congestion and showed some old cicatrices. In the right lung the lower lobe was collapsed and puckered into a mass of new growth which occupied the lower posterior margin. The growth was pigmented and caseous in parts. The glands on the left side of the neck were much enlarged. The internal jugular and subclavian veins were thrombosed at their junction to form the left innominate vein, and this vessel was also blocked at its junction with the vena cava and contained a quantity of milky fluid, apparently accumulated chyle. Within the cranial cavity there was found some increase of cerebro-spinal fluid at the base of the brain. There was a nodule of growth $\frac{9}{16}$ in. deep by $\frac{5}{8}$ in. wide, and 1 in. in antero-posterior diameter at the vertex close to the longitudinal fissure on the right side, occupying the posterior and inner part of the superior frontal and part of the marginal convolution. A second small growth ¼ in. in diameter was visible in the posterior limb of the right internal capsule, and a third nodule $\frac{1}{16}$ in. in diameter on the external capsule at the edge of the lenticular nucleus, just on a level with the former growth. A fourth tumour $\frac{3}{4}$ in. in diameter occurred in the centrum ovale just beneath the cortex on a level with the posterior end of the caudate nucleus. All these lesions were in the right hemisphere. On the left side no new growths were found, but there was a small patch of softening of about the size and shape of a grain of wheat, vertically placed, situated on the anterior limb of the internal capsule. The medulla and pons were normal and there was no apparent disease of the cerebral vessels. No descending degeneration was found in the pons or crura. The spinal cord was unfortunately not preserved. Microscopically the growth was carcinoma consisting of large glandular cells and little intervening stroma.

*Remarks.*—On the patient's admission the symptoms of crossed paralysis suggested some lesion of the pons, but the slightness of the affection made it difficult to conjecture what the exact nature of this lesion might be. Later, the paralysis appeared to improve and what was left of it was merged in the general weakness resulting from the grave condition of the patient. Signs of intra-thoracic pressure were now the prominent features of the case; the pleurisy, the character of the fluid withdrawn, and the venous thrombosis in various parts of the body pointed to the probability of malignant disease. The gastric ulcer found at the necropsy was not diagnosed during life, though the existence of malignant disease of the stomach had been suspected owing to the emaciation, the epigastric pain and tenderness, and the flatulent dyspepsia. The exact seat of the original cancer could not be determined. The first symptoms were caused by the cerebral growths, which were multiple and evidently secondary. The growth in the lung was the most advanced, and the early occurrence of cough, which had been complained of before admission, might point to this as the original lesion, but the rarity of this seat of primary carcinoma makes the suggestion doubtful. No primary focus could be found in the abdomen to account for the enlarged glands there and it is noteworthy that these occurred late in the history of the case. Judging from the apparently normal condition of the uterus and appendages no severe operation could have been performed, such as might throw any light on the origin of the malignant disease.

The distribution of the paralysis seems fairly accounted for by the cerebral lesions. The large nodule at the vertex occupied part of the leg area; the growth in the right internal capsule explained the weakness of the arm and indirect pressure exerted by it on the fibres of the posterior limb of the capsule was no doubt the origin of the anæsthesia. The facial paralysis on the other side was apparently due to the minute patch of softening in the left internal capsule, but the origin of this lesion was not easily explicable. It may perhaps have been due to some small venous thrombosis, analogous to those occurring later in other parts, such as seems often to occur in malignant disease. The conjunction of the two distinct forms of lesion on opposite sides of the brain is at least unusual. Another point of considerable interest is presented by the fact that the paralysis on both sides completely or almost completely disappeared, although the organic cause of it on the right side of the brain cannot have lessened in extent and was probably actively progressing. The paralysis must be classed as "functional," due to some disturbance in the activity of the nerve-units, not to their destruction. What, however, the exciting cause of the original fits and the ensuing paralysis may have been must remain unexplained. There was no sign of any hæmorrhage into any of the growths such as might have caused a sudden cerebral disturbance. Further, there was no sign of any great increase of intracranial tension, as the convolutions were not flattened, nor was there headache, vomiting, or optic neuritis. In short, the cerebral condition in no way shortened life and had not the thoracic disease progressed so rapidly the patient might have left the hospital relieved of her paralysis, which would have remained entirely unaccounted for.

**York-street, Portman-square, W.**

# TWO CASES OF HALFPENNIES IMPACTED IN THE ŒSOPHAGUS FOR FIVE AND SIX MONTHS RESPECTIVELY, REVEALED BY X RAYS AND REMOVED.

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,

SENIOR SURGEON TO THE GENERAL INFIRMARY AT LEEDS; PROFESSOR OF SURGERY IN THE YORKSHIRE COLLEGE OF THE VICTORIA UNIVERSITY.

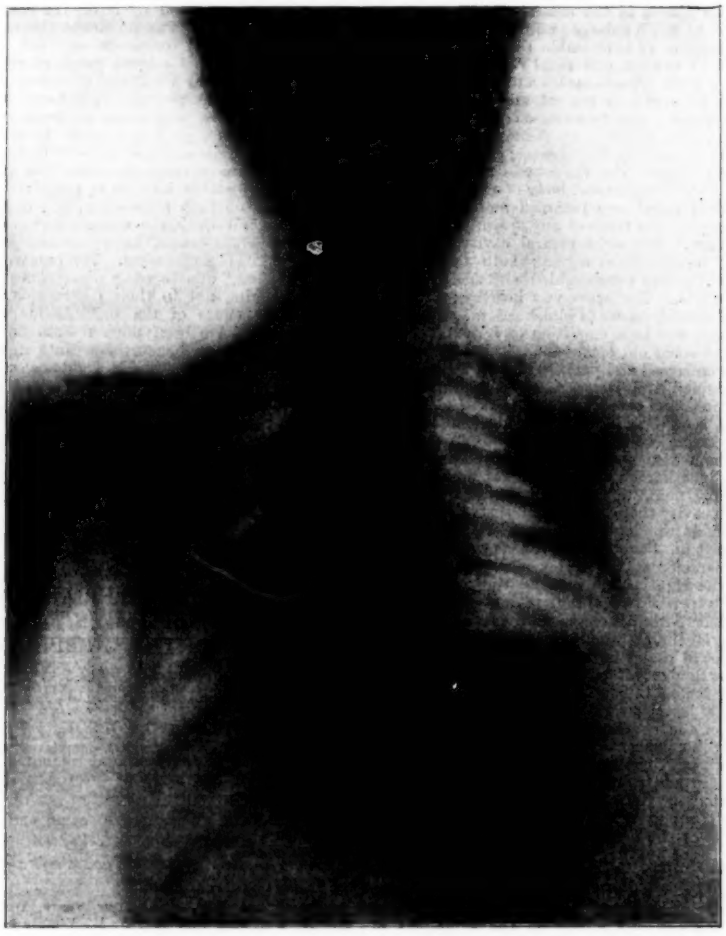
THE following unusual cases came under my observation quite independently of each other within the same week and were treated by me on consecutive operating days in the Leeds General Infirmary.

CASE 1.—A boy, aged four years, was sent to me by Mr. H. Keighley and Mr. J. H. Woods of Batley with the history that six months previously he had swallowed a halfpenny and at the time had almost died from suffocation, which was prevented by his mother's presence of mind in pushing the coin beyond the entrance of the larynx by means of her finger. The coin was supposed to have passed into the stomach, as although he had some pain in swallowing there was no actual obstruction to the passage of food. Some weeks after he began to have pain in his neck, to have difficulty in swallowing, and to hold his head stiffly to the left side, almost as if he had caries of the cervical spine. He began to lose flesh and to look ill. It was then decided that he should be photographed by the Roentgen rays. The photograph (by Messrs. Reynolds and Branson of Leeds) was brought with the patient and it shows (*vide* figure) the coin impacted in the œsophagus at a point opposite the pericardium, where it would also be in close contact with the left pleura and with the aorta. I decided to attempt its removal through the patient's mouth, and that failing I obtained permission to perform œsophagotomy. It was explained to the parents that there might be risk of hæmorrhage or perforation in removing the coin from its bed, but they decided to accept all eventualities. On Feb. 18th, the patient being under ether, I inserted the coin-catcher invented by the late Mr. Sam Smith, and at the

first introduction I withdrew the halfpenny without any difficulty. It was much corroded and covered with greenish-black material. Nothing untoward occurred and the boy left the infirmary quite well the next day.

CASE 2.—The patient was also a boy, aged five years, and the photograph showed the coin in the same position as in Case 1. The same treatment was adopted and with the same result.

The "coin-catcher" is a most ingenious instrument with which I have removed coins recently swallowed on other occasions, and as it is so simple in action and so painless in application it should in any doubtful case be applied as soon as the patient comes under observation. In cases of doubt the new photography can be employed with great advantage, as shown in the two examples I have related. I noticed a report in one of the journals lately that in a similar case, where the coin had been swallowed only a short time previously, œsophagotomy was performed without any attempts being made to remove it through the mouth. My experience would lead me to conclude that such an operation should rarely be necessary and could only be justifiable after the simple means I have related had been thoroughly tried and had failed.



Skiagram showing impaction of halfpenny in the œsophagus opposite the pericardium.

**Leeds.**

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NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS.—The annual meeting of governors was held on July 11th at the Society's offices, 12, Buckingham-street, Strand, the chair being taken by Mr. E. Montefiore Micholls. In the report for the past year presented by the hon. medical staff it is stated that "a marked improvement has been noted in the majority of cases at the Chalfont Colony," this improvement being especially pronounced in the case of the women colonists. The report of the Executive Committee refers to the rapid growth of the Colony as evidenced by the fact that besides one Home for twenty-four colonists recently completed but not yet occupied four others are now in course of erection, the cost having been provided by contributions for this specific purpose. "Yet the increase of accommodation," it is stated, "does not keep pace with the increase in the number of candidates for admission. This constant development and expansion is therefore clearly a necessity, but it is not always realised that every new Home erected at the Colony creates new wants; on the contrary, these extensions lead to the impression that existing wants have been more than adequately supplied." The result is "that the flow of generosity has been checked when the need for it is greatest," and the gravity of the financial position has led H.R.H. the Duke of York, as President, to issue a special appeal on behalf of the society for the sum of £7000 for certain immediately necessary purposes detailed in the report.

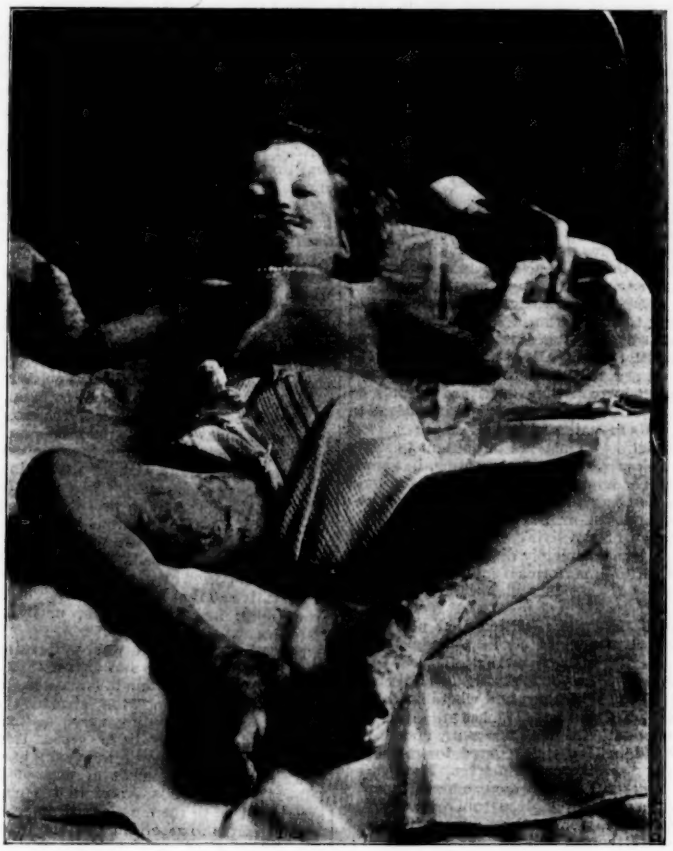
# A CASE OF PEMPHIGUS SERPIGINOSUS.

BY ROBERT Y. AITKEN, M.D. GLASG.,
SENIOR HOUSE SURGEON TO THE BLACKBURN AND EAST LANCASHIRE INFIRMARY.

THE following case was a typical example of a rare form of a rare disease. Of the English text-books on medicine which I have consulted Fagge's is the only one in which a reference to the disease is to be found. It is not mentioned in two of the most recent English works on skin disease. As pemphigus only occurs once in about 400 cases of skin disease this serpiginous variety must be exceedingly rare. The description given by Fagge is so accurate that it can hardly be improved upon. He says: "The bullæ, which are small, are seen on the advancing border of a considerable area of skin formerly the seat of others which have disappeared." He adds that "when first seen in this later stage it might well puzzle an observer."

A girl, aged five years, was admitted to the Blackburn and East Lancashire Infirmary, under the care of Dr. J. M. H. Martin, on March 25th, 1898. She was the eldest of three healthy children. There was no suspicion of a syphilitic taint. Till the onset of the present trouble the child had been quite healthy. From the mother's account it appeared that the disease began in the skin of the cheek near the angle of the mouth sixteen months ago. The child did not complain of itching till the blisters were well developed. As the first blisters dried up others appeared and the disease extended to the neck and chest. Later the disease appeared on the arms, and six months from the commencement it was noticed on the groins and in front of the ankles. The arms were almost well when the eruption appeared on the legs, but they became worse afterwards. When the child was first seen she was in the condition shown in the illustration. The mother stated that the largest blister she noticed was quite an inch in diameter and they varied from this size down to small vesicles. There was no elevation of temperature and all the time the eruption was coming out the general health of the child did not appear to suffer much. This is not unusual in ordinary pemphigus. In the way of treatment local applications of various kinds were tried without success. I may say that she had been under treatment for months at home. When the diagnosis was made arsenic in the form of Fowler's solution, in 4-minim doses thrice daily, was prescribed. Within a week improvement had begun and at the end of a month only a deep red stain marked the seat of the eruption. I report the case because of its rarity and to show the therapeutic value of arsenic in the disease, as Hebra wrote that he knew "of no internal medicine which has proved efficacious against pemphigus." I am indebted to Dr. Martin for permission to publish the case.

Blackburn.



From a photograph of the patient. The bullæ and scarring are well seen on the right thigh, left leg, and left arm.

THE LORD CHIEF JUSTICE ON THE MEDICAL PROFESSION.—At the Bristol Assizes which were held recently the Lord Chief Justice of England in alluding to the medical profession remarked that he thought there was no profession in the world which rendered more entirely gratuitous service than the members of the medical profession and added that so far as his experience went there were not the sordid considerations in this profession which were present in others.

# VITALITY:
# AN APPEAL, AN APOLOGY, AND A CHALLENGE ADDRESSED TO BROTHER PRACTITIONERS.

BY

LIONEL S. BEALE.

(*Continued from page 1615, June 11th.*)

I APPEAL with hope to rising biologists having good eyes and understandings and lissome fingers to do their best, and quickly, to confirm or disprove anatomical details brought under our notice during the last forty years or more. Many broad questions of the greatest general interest and of wide application are still undecided—questions which are well worthy of further careful investigation by new methods of inquiry different from those usually followed. And I trust that observers, not only in Europe and America, but the young workers at microscopical investigation in India, Australia, and Japan, where there are many forms of life very different from our own, will help in endeavouring to set at rest some of the most difficult questions which have long resisted our best efforts, but which are certainly not beyond our powers and means of minute investigation. For example, concerning the general arrangement of the most delicate nerve fibres distributed to various organs of sense, to sensitive surfaces, to muscular fibres, and their exact relation to the tissues and bioplasm they influence, we have still much to learn. It is not only as regards minute anatomical detail that we require more complete knowledge, but some general questions with reference to vital action, tissue formation, and the precise action of some of the most important tissue arrangements in the body, not to speak of the question of the nature of mental work, are still open to inquiry. Are not very different and often incompatible doctrines entertained and taught by rival authorities? Microscopical investigation may even yet yield results of philosophical significance.

But to form correct views we must not be content to study only the fully formed tissues of adult organisms, but must endeavour to form an accurate conception of the several stages through which tissues pass from the first indications in connexion with the bioplasm or living matter to the fully formed state when much of the living matter of the early period of development has completely disappeared, and the tissue exhibits structure and performs functions belonging to a category different from that in which the living matter and its action must be placed.

It must I venture to think be admitted that not a few of the specimens of tissues mounted in Canada balsam display little more than the distorted skeletons of dead tissues variously modified by the particular mode of preparation to which they have been subjected; and where fine nerve-fibres are the objects studied the appearances are often open to more than one interpretation. Long ago many of us being impressed with such difficulties endeavoured to gain some advantage by proceeding on different principles. The tissues, always moist in their natural state, were examined in water in which various matters were dissolved to prevent decomposition of the tissues and to render them more transparent, in the hope that their structure and various anatomical or other constituents might be more clearly discerned. The process of preparation I was led to adopt was fully described in communications to the Royal Microscopical Society and published in their Transactions and afterwards in my books. Many of my specimens were shown in class and at my lectures delivered at the Royal College of Physicians of London. My views were fully explained in the Lumleian Lectures for 1875, and afterwards published.[1]

In examining many sections of soft complex tissues mounted in Canada balsam we must bear in mind that when in the living organism they were not compressed and matted together and pressed against one another, as seen in the balsam preparation. Though in living nature elementary parts are near to one another, each is supported and surrounded by fluid which by the action of the bioplasts is always in slow movement and gradually undergoing changes in its composition. Thus the several component parts are protected from injury and undue pressure, each is allowed free action, and at the same time preserved in a healthy condition by the free escape and removal of products of disintegration. This is probably what we should discern if it were possible to examine during life with high magnifying powers the ultimate ramifications of the nerve fibres and their relation to neighbouring tissue elements. Not only so, but from an early period of life onwards we should see suspended in the interstitial fluid minute particles of bioplasm like those present in the blood, lymph and chyle which live, grow, multiply, and after forming various substances die, the various substances resulting from death being dissolved and probably then taken up by other kinds of living matter. These considerations long ago led me to think that much more would be made out if a plan of examination could be devised by which media miscible with water in all proportions and of high refracting power, capable alike of dilution and concentration, were alone employed in preparing all the structures of man and other organisms for microscopical examination under high powers. The process was gradually improved and was found applicable to minute investigations into the structure and formation of tissues of all organisms, whether simple or complex, including plants, under the twenty-fifth-of-an-inch power made for me by Powell and Lealand in 1860.

After much careful work according to various methods at that time in use on the tissues of a variety of organisms, and efforts to trace the changes which occurred in their development and formation I discovered, like many other observers before and since, that the very points of all others which I desired to make clear, were the most difficult to decide and several were left doubtful. One required a process equally suitable for the investigation of all structures, from those which were soft and almost diffluent to those which were exceedingly hard, as bone, tooth structures, enamel, and shell. To study the gradual formative changes in such tissues one required a thin section which included the soft growing matter, the partially formed matter, and the complete structure. To follow the fine ramifications of nerve-fibres for some distance so as to form an idea of their relation to the tissues they influenced, the preparation required to be in such a state that it could be pressed or frayed out by needles, while at the same time the adjacent textures were rendered transparent without disturbing the relations of the several tissue-elements. Then one required to see the capillary vessels and the nerves running very near to them; and, above all, the numerous bioplasts and their relation to the several tissues with which they were connected and which they had formed. And, lastly, it was necessary that the medium in which the specimen was placed should be preservative so that if needful it might be reserved, placed in fresh fluid, again and again, until it became sufficiently transparent for our purpose.

The plan I pursued was well suited for the study of bioplasm of all forms and in different situations in various animals, in insects and crustacea, and in plants, for researches concerning the structure of all parts of the nervous system, including nerve centres of every kind. In the bladder of the little green tree-frog and the thin membrane of the wing of the young bat I was able to clearly make out the arrangement of most delicate nerve fibres distributed to the tissues and to the capillary vessels, to the arterioles and to the muscular tissues.

In attempts to ascertain whether in all living nature there was evidence of any uniform system of action—of any principle which does not affect the "actions and reactions" of ordinary matter—the advantages of a uniform system of inquiry and of preparing so that everything submitted to examination might be treated in the same way must be obvious. Only upon such a plan can very different structures be compared with one another and that which was common to all in arrangement or formation determined. The determination of the directions in which growth was occurring and nutrient matter being introduced, the products of disintegration removed, were also points of importance which had to be considered in the inquiry and if possible elucidated.

The plan of investigation I have pursued is in some cases difficult to practise and I must admit is troublesome and requires much patience. It is not surprising that among teachers of microscopic investigation and those who prepare microscopical specimens for sale it has not been in favour. Great care is necessary in preserving specimens permanently and it is a little uncertain. After some years, however,

[1] "On Life and on Vital Action in Health and Disease," 1875. London: J. and A. Churchill.

many beautiful specimens of very soft tissues have been successfully preserved and very delicate tissues have retained their characters. For new investigations, however, the process certainly has very great advantages and I cannot but think that some day the principles upon which it was conducted will be recognised by many, followed out, and much improved. The mere fact of our being able to keep pieces of properly prepared tissues in strong glycerine for a length of time, not only without deterioration, but with the certainty of great improvement in transparency and in the state of the tissues for further careful investigation with high powers is conclusive. The tissues will have become after some weeks more transparent, will suffer less from pressure when applied to the thin glass in order to make them thin enough for investigation, and thin sections may be dissected or frayed out in places with needles and without the relative position of the several tissues being altered or the relations of the bioplasts to the tissue or formed matters, or to one another being in any way disturbed. A piece of a highly complex texture which had been soaking for several years in good glycerine in a well-corked bottle and kept in a cool place has provided me with beautiful specimens from which valuable and quite unexpected information was gained.

Is there a naturalist in the world who feels satisfied that the evidence so far obtained in any way justifies the inference that all living things have been derived from a small or large amount of simple "undifferentiated protoplasm," or that the constitution of any one of the innumerable organisms is adequately accounted for by attributing it to the properties of the materials of which its body is composed?

Is there a microscopical observer who believes that the formation of the wonderful structures he studies is adequately explained by the assertion that it has been built up by "molecular forces" or that the movement of a small portion of the clear, transparent matter of an amœba is to be adequately accounted for by potential energy or chemical change?

Surely the great object of studying the works of nature is to try to ascertain how they were made, how they came about, how they work. Is not this the reason why we endeavour to see as far as we can into the arrangements; why we try to increase our power of seeing and make things appear to us hundreds of times larger than they really are; why we spend hours, days, weeks, years trying to learn all we can? This, however, is not the idea which influences all or the theory upon which all scientific investigation is carried on. Even in these days of liberty and freedom of thought and work, some would condemn the microscopical observer to microscopical observation only. He is not to think, to theorise, to speculate, to conjecture; but his results are to be judged by the physicist, the chemist, the mathematician, the generaliser, and the philosopher. If his observations accord with the general views entertained by these authorities the work is approved; if not it is unnoticed or ignored. Even in our empire of liberty there always seems to be springing up amongst us just a little tendency on the part of some liberal minds to form a sort of intellectual syndicate for the purpose of deciding for the people what they ought to think, accept, believe, and teach concerning nature, just as if certain scientifics had somehow captured nature for themselves and had acquired the right to represent her and to declare precisely how she was to be generally regarded by the common people.

### BIOPLASM.

The demonstration of structure and the elucidation of the precise way in which it slowly appears and very gradually acquires its characters and properties naturally leads us to endeavour to ascertain the nature of the processes at work in its production and the principles according to which they are governed, guided, and regulated. Much of our physiology of the last fifty years is a physiology of the fully-formed active tissues of the adult—tissues which consist of a considerable amount of débris which under the name of connective tissue has been gradually accumulating for years around many of the active tissues. From the time when the active tissue was first formed and began to discharge its work this indefinite tissue has been, even under the greatest advantages, steadily increasing, and as age advances it seriously impedes the free action of some of the most important tissues, particularly nerve and muscle, and it is one of the causes of that natural deterioration which increases as old age advances and which may lead to natural death.

My views on tissue formation, including the softest, consisting principally of water, and the hardest, containing very little, such as shell, enamel, ivory, dentine, horn, and nail, were published in 1860–61 and soon afterwards were translated into German by my friend, Professor Victor Carus of Leipzig. The living matter was distinguished from the formed matter in each case, the important part taken by the first in the production of formed matter shown, and the absolute difference between the living matter and matter in every other state insisted upon. These views have been recently referred to by Kölliker.[1] But unfortunately 1867 seems to be the latest reference made to any of my observations, though I have done much work since that date and have published several papers and books.

The very important question of the existence or non-existence of vitality surely ought to be seriously considered and carefully debated. For the last forty years we have had at our disposal magnifying powers of 1000 diameters and upwards, by the aid of which many new facts have been ascertained with regard to the arrangement, connexion and action of various forms of bioplasm in different organisms and under different conditions. We are certainly able to distinguish the living matter, which forms tissue from the tissue itself, which has been formed by it, and we have succeeded in proving that tissue does not add tissue to that which already exists. Tissue never forms tissue.

Many of the conclusions which I have been compelled to adopt from actual observation have been so little considered that, interested as I am in the question, it would have been long ago almost a relief to have been judged wrong and to have found that the doctrine according to which all things living are but machines had proved to be correct. A fundamental and general question of such vast interest and importance to every thoughtful person as the *Nature of life* ought not for ever to remain undecided. Naturally, many observers, like myself, have been afraid of pursuing the subject in a wrong direction, and have been hoping for a decision as to first principles by which they might be guided in their further progress in this department of natural knowledge.

It has to be borne in mind that the general evidence which has been accumulating for centuries and the minute research which has been conducted by hundreds of well-trained, naturally patient and thoughtful observers who, during the last fifty years and more, have enjoyed incalculable advantages over their predecessors as regards methods of investigation as well as instruments of research, seems to prove beyond question that if we allow our judgment to be swayed by reason we can no longer accept the dictum that "the living and the non-living are one." If this be so, how many vague though most positive assertions of like tendency must be wrecked! Indeed, is it not now certain that *living* belongs to a category from which all *non-living* must for the future be excluded? Nay, will it not ere long be generally admitted that in the whole living world *Vitality*, during the short time that it influences given particles of matter, reigns supreme, and transcends, guides and governs forces, properties and tendencies which dominate the material world?

The question of the nature of life has been well considered as regards its supposed physico-chemical aspect rather than from the side of actual knowledge, which has been gained since we have been able to study living matter and the process of tissue-construction as it occurs in the widely different organisms around us with the aid of powers magnifying 1000 diameters or more, and with other advantages our predecessors could not enjoy. But ought we not to consider whether the facts now before us justify the view that man is a mechanism or a mere chemico-mechanical apparatus? The conclusions arrived at from the physico-chemical side have been widely taught by distinguished scientific men; but has the study of the comparatively inconspicuous living matter present in all living things received the attention it deserves? The process of construction of tissue in the common living organisms seems to have been little investigated of late, considering the vastly increased advantages we who try to peer into the deepest recesses of the specks of living matter now enjoy. Surely vitality deserves more notice from calm philosophy than has yet been accorded to it.

[1] Verhandlungen der Physik-Medicinischen Gesellschaft zu Würzburg. Neue Folge, xxxi. Band, No. 5, "Die Energiden von v. Sachs im Lichte der Gewebelehre der Thiere."

We want enlightenment as to the very first principles—the nature of the general changes which occur—how living matter in the simplest organisms is formed—how it grows and multiplies—and the general nature and source of its powers. The great advances of physical physiology and organic chemistry still leave us in doubt as to first principles and we have much yet to learn even concerning the movements of what has been called "undifferentiated protoplasm." The movements of a portion of the structureless matter of a leucocyte, a pus or mucus corpuscle have yet to be explained and accounted for—nay, the cause of the movements of the clear, transparent matter of an amœba which it is said have been exhibited by corpuscles made of gum, water, and oil, have so far resisted the efforts of many of the most talented investigators who have had great experience in inquiries of the kind to account for on chemico-physical principles.

For years have I been trying to convince myself that the views generally accepted by the majority of scientific men were justified by facts of observation and experiment and that my widely different conclusions were erroneous, but I have not been able to obtain a scientific reasonable explanation of the movements of the colourless and perfectly structureless matter of a small and actively growing amœba from any authority, while after all the cross-examination to which I have subjected myself I have failed to shake my belief in vitality as the cause of the movement which no molecular vibrations, osmotic currents, or chemical differentiations will account for.

While much attention has been given to the general structure of all classes of living organisms, their external coverings, their internal organs, and their developmental phenomena, comparatively little notice has been taken of the millions of minute particles of structureless living matter present during their whole life in all their tissues and free in some of the fluids of the body. These are the colourless, structureless bioplasts, usually spherical, or oval, and sometimes stellate in form, from which all structure proceeds, and by the vital action of which in promoting free circulation of interstitial fluid in the very substance of all the tissues the integrity of the latter is preserved and various partially soluble substances which sometimes tend to accumulate and interfere with the action of some tissues are kept in solution. Even deposits may sometimes be dissolved and removed. Many careful investigations have been conducted by highly skilled observers upon the nerves and important results concerning nerve action have been obtained, but to what extent this "action" depends upon changes in the nerve fibre and in the bioplasm particles in connexion with all the finer ramifications of the nerves has not been determined.

This living matter, or bioplasm, part of which ceases to live, while, at the same time, other portions still living communicate their wonderful powers to lifeless matter drawn into its substance in solution in the interstitial fluid, is indeed the *only active living part of us*, for by far the greater part of all our tissues and organs consists of formed matter which cannot of itself increase and multiply, take up nutrient matter, cause it to live and communicate to non-living matter its vital powers.

This bioplasm, the least conspicuous portion of the body, is nevertheless the most important, all our tissues and organs having been derived from antecedent bioplasm and to it their formation, structure, composition, and action are entirely due. So, too, in some of the most important morbid changes the inconspicuous particles of bioplasm are concerned, and it is by the influence of air, water, food and medicines that we are enabled in many cases to promote the return to the normal state of action of bioplasm and thus to restore the healthy condition of tissues, organs, and, perhaps, of the organism generally, that had for some time, perhaps, been out of order.

Bioplasm, which generally consists of more than 90 per cent. of water, is, then, by far the most important matter in living nature and its powers are infinite. All growth, all increase in the size and number of living things, as I have endeavoured to show, depend upon it. Increase is due to bioplasm only. When a particle of bioplasm dies that particular particle can never be restored to life. Lower organisms which, though dead, are said to have been revived or revivified, have, in fact, never ceased to live—have not died.

When a complex living organism dies all its bioplasm does not die at the same moment, and in some cases even tissue formation continues for a short time after the organism as a whole has ceased to live. Even in man under certain conditions some bioplasts may be for a short time more active than they were at the moment of death. In general, the first bioplasm to die in the human subject is that which takes part in the highest functions of the nervous system—the bioplasm near the surface of the grey matter of the cerebral convolutions, which is probably concerned in those mental phenomena by which man is marked off from all lower creatures.

There is nothing in the non-living world which in any way resembles death. All that lives must die and there can be no living matter which does not cease to live, the matter not being reduced in weight by its loss—its life, as far as can be ascertained, not being changed or transformed into any known force, property, or power.

The rate at which bioplasm takes up pabulum and grows and multiplies varies greatly in different organisms and in different parts of the same organism. Generally, formative changes occur slowly; indeed, it may be said that the formation of healthy, well-formed tissue, the elementary parts of which perform their offices most advantageously for the well-being of the organism and for the longest period during life, has been laid down evenly, equably, and at a normal rate. If the process occurs too slowly or too quickly there is a departure from the normal condition detrimental in many ways.

Generally, the production by bioplasm of bioplasts, having far extending and different constructive powers, is a far slower vital process than the production of the succeeding generations of bioplasts which are evolved series after series from the first in gradually increasing numbers and of more limited vital activity. For instance, the vital orderly arrangement slowly taken up by the bioplasts of the plant, produced during the winter months and in comparative darkness from the descendants of which the so-called cells, vessels, and other structures constituting the leaf or flower that is to appear in spring are formed, is a much slower process involving much less taking up and conversion of nutrient matter, than is the growth and multiplication of the succeeding series of bioplasts the last of which takes part in the formation of the several tissues when the nutrient process is active. So also bioplasts taking part in the formation of the pollen and of the ovule require a longer time for this evolution than do those concerned in the production of leaves and the several structures of the flower and its appendages. And, indeed, all through living nature the evolution of the bioplasm from which the infinite series of bioplasts which follow in successively increasing numbers generation after generation, from which at last tissues and organs of wonderful complexity and functional activity or lasting firmness and comparative passivity emanate, requires a much longer time for its completion than does the production of the series which approach nearer and nearer to the bioplasts concerned in the evolution of tissue-producing bioplasts.

Every step we gain in our progress towards the elucidation of the nature of actual vital changes surely renders it less and less reasonable to regard these wonderful vital phenomena as being in any way akin to forces, powers, or properties of any known ordinary matter. This mysterious directing, far-seeing, purposive agency, preparing for certain far-off constructive orderly arrangements of tissues and organs with special powers of action not to be imitated, forming structures operating in, and known only by us in, the living world, must surely be something different from energy or any cosmic forces or properties of matter belonging to the material universe.

The multiplication of bioplasts, having developmental formative powers little inferior to those possessed at an early period of development, after maturity has been reached, varies greatly in different classes of organisms. Thus the adult lobster may reproduce a new claw after the removal of the old one and the lizard its tail after removal; and there are some complex organisms which increase by division, highly complex parts like head and tail being developed before the transverse division of the one organism into two takes place. In many simple organisms multiplication proceeds by division and subdivision under favourable conditions when a certain size has been attained by growth, while in man and the higher animals, even before complete maturity is reached, "cicatricial tissue" seems in many cases to represent the extent of developmental formative power remaining in most forms of bioplasm—not a limb or a finger, not even a complex nerve papilla, a villus, or a

sweat or sebaceous gland can be again developed in the situations from which these structures have been removed, there being no bioplasts of sufficiently varied and sufficiently general formative powers to reproduce them.

I think all who have examined living things and the tissues of organisms soon after death must often have remarked the general resemblance of different kinds of bioplasm; and the remarkable differences between the several species and individuals which constitute the living world. The likeness of all bioplasm, the wide differences between fully-formed organisms and tissues formed by bioplasm—and impossible in its absence—are evident through all living nature. And I think all who will consider the facts will be more inclined to attribute these differences to differences of power of the bioplasm than to any character or properties of mere matter to be disclosed by the most skilful physicist or chemist—in fact, to vitality—a power working in every particle of the living world—a factor which *cannot be seen, and which cannot be touched, weighed, or measured, isolated, or captured in any way*, but whose marvellous influence upon matter which can be taken up by living things has been handed down from living particle to lifeless matter without a single break or moment's cessation ever since the first appearance of life. A break, an interruption in the vital process, is death.

Consider but a few plants far removed in character from one another and a long distance from the country where they grew, but having very well-marked characteristics and of pretty strong constitution so as not to die immediately, which it is attempted to grow under conditions to which they have not been accustomed. From lovely Japan we have received many such and we long for more. I need only refer to palms, bamboos, maples, and aralias, which have been my delight and have lived many years in the poorest soil within a few miles of London. All came when very small, all live very near to one another and have remained in the same places since they were first planted. All have survived and were hardly hurt by the hard winter of 1895, when water placed near any part of them must not only have frozen hard, but any near the roots must have remained frozen for nearly three months without thawing once. After fourteen years three of the palms have good leaves nearly 4 ft. in width and of good substance—bamboo canes are over 12 ft. in height and the other plants are in sound health and some improve in vigour year after year. Now will anyone maintain that the individuality and great resisting power to adverse conditions, and the adaptability exhibited by these plants, so very different in these respects to many allied species, which would not have survived a single winter if placed under similar circumstances, are due to the material properties of the matter of which they are composed—to any physical or chemical characters? Is it not far more probable, nay, almost certain, that their striking power of resisting adverse conditions is due rather to remarkable vital powers handed down from living to non-living particles without interruption, perhaps for thousands of years; and is it not practically certain that if transferred to their old home they would continue well under the altered conditions and live to be as old as others of the same kind, just as we see happens in the case of some higher organisms and also due to the vital powers of the bioplasm which so far have not been scientifically explained?

Or, as another example of the wonderful vital powers of plant-bioplasm in the fully-formed organism, after serious deterioration had existed for years, when there appeared little hope of improvement, at least under conditions of life widely differing from those of their natural habitat—let me refer to some camellias, which had been deteriorating for some years under the conditions shown by experience to be fairly suitable for these plants when grown in this country. About twelve years ago the plants referred to were in so bad a state that they had been almost given up for lost. Being of no value I gladly received the patients. Knowing that they disliked sunshine and having a good rhododendron hedge in the right position I placed them in an alcove looking towards the pole-star, in peat and sand, and they have not been moved. After a couple of years they began to improve very decidedly and were evidently recovering from the prolonged tissue degeneration from which they had suffered. Their general health so far improved that they formed flower buds, few of which, however, reached the flowering stage till three or four years ago. But last April there were more than a hundred flowers on two trees—one white, the other red,—most of which were well formed and the red flowers were of good colour. Quite certain about the improvement which had occurred I obtained a still more hopeless subject, which after three or four years of almost stationary helplessness is now recovering and forming good leaves. Who will maintain that such facts are to be accounted for by physics or chemistry, or deny that they are to be explained by the gradual production of bioplasm of a more healthy character year after year?

When one considers how closely the living matter, the bioplasm, which takes part in the formation of organisms differing so remarkably from one another in general characters, and in their position among living things; and, according to chemists, the close relation between the substances obtained from it in the laboratory and the comparatively few elements present—the very large proportion of water always existing in living matter and the probable absolute impossibility of living matter of any kind existing even for an instant in a perfectly dry state—it is difficult to resist concluding that the wonderful differences between living things are due to difference in *power* rather than to difference in *matter*, or to a difference in the conditions under which life is carried on—a *power which only influences matter which comes very close to, indeed which passes into, the very substance of the living particle*. The marvellous active power has been transmitted without loss, without one break or fault perhaps during thousands of years. In some cases it seems to be modified, we know not how or why, but powers of modification, like other attributes of vital power, are obviously not unlimited, though the limits within which modification in power can occur without cessation of vital power, cannot be accurately ascertained. The transmission of vital power and the increase in the number of living particles seems to vary according as the surrounding conditions are favourable or not, the power being without limit, though it may cease for ever at any moment. In living nature likeness never reaches identity, and any two forms, however closely they resemble each other, can in nearly all cases be distinguished. Each one of thousands of leaves could at once be identified as belonging to a particular tree, but it would probably be impossible to find two among many thousands which did not exhibit distinguishing marks of some kind. In the living world there is nothing which comes near to mathematical accuracy, no process characteristic of vitality under the sole dominion of physical and chemical law. In the world of life we have never-ceasing movement. In every tissues in every organism, from the very lowest to the highest and most complex, from the youngest to the oldest, from the first moment of the appearance of living matter long, long ago, to the production of that which began to live just this instant, movement which ceases only with death has existed — movement in matter destitute of structure, containing much water, clear as glass, mobile in all its parts—movement called spontaneous, automatic — movements of matter which may be seen but the exact nature and cause of which is undiscovered. Among the substances obtained after its death are proteids, fatty and certain other organic matters, and salts; but the most important of all, and invariably present in large proportion in everything that lives and absolutely necessary to its life, is water. Without water there is no life. How the materials obtained after the death of bioplasm were arranged, how their elements were grouped in the living state, no chemist has yet been able to decide; nor has any physicist yet discovered what happens to living matter at the moment of its death. In fact, neither the chemical constitution nor the molecular arrangement of the matter that lives—of the bioplasm—has yet been determined.

It seems to be agreed that the living body is to be regarded as a transformer of energy, a converter of force, but the transformation, the conversion, is, I think, effected only in the colourless, structureless, mobile living matter, in the bioplasm which constitutes so small and so inconspicuous a portion of any complex living organism. The bioplasm is the only spot which is the seat of action of the wonderful changing, transforming power which is imparted to the non-living matter just brought in solution within the sphere of its influence where the latter acquires similar powers and then manifests vital movements. But heat and light and electricity are not altogether unknown in connexion with the mobile particles of certain kinds of moist living

bioplasm in which movement is always present. The instant living matter dies all vital movement, all transforming action, ceases. Shall I be expelled from all scientific society if I venture to suggest that this wonderful power upon which depends the living and dying of the only matter which lives now and of that which lived in the past is—Vitality?

*(To be concluded.)*

## A CASE OF GASTRO-INTESTINAL HÆMORRHAGE IN A NEWLY-BORN CHILD; TREATMENT BY LARGE DOSES OF CALCIUM CHLORIDE; RECOVERY.

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THE child who is the subject of this paper was the first offspring of perfectly healthy parents. There was no family history of hæmophilia and the only point of note as regards the labour is that forceps were used when the head was quite low down in the pelvis as there was some delay in the birth. The puerperal period of the mother was quite normal, but it may be noted that her pulse kept well above 100 per minute for the first week, although the temperature never rose above 99·2° F. after the first day. During the first three days of the child's life no unusual symptoms were observed. On the fourth day, however, almost exactly 72 hours after the birth, the infant vomited some dark reddish-brown blood and 3 hours later passed a motion of the same colour, another motion in 2 hours, and another again 2 hours afterwards—i.e., blood was vomited once and three motions of blood were passed during the day, the first being at 12 midday. The amount of blood on each occasion was not great, but it left the patient in a rather anæmic condition. On the next day there was no hæmatemesis. The child was sick once or twice after taking medicine, but there was no blood. Four more motions of blood of about the same amount as the day before were passed and the infant was very anæmic and feeble indeed. On the next day there was no repetition of the hæmatemesis, but there were four more motions of blood considerably less, however, in amount. After this no more blood was passed and the child rapidly convalesced from the resulting anæmia.

The diagnosis of the cause of gastro-intestinal hæmorrhage in newly-born infants is not as a rule difficult. The conditions which may give rise to it are as follows: (*a*) There may be hæmorrhage into the bowel caused by pressure at birth, just as there may be hæmorrhage into other viscera, such as the brain or lungs. It may even be of sufficient amount to cause intestinal obstruction. In my case this explanation was negatived by the fact that the child passed ordinary motions for the first two days of life. This could not have been the case if there were blood in the bowel at birth, for it would certainly have shown itself at the latest at least after one or two motions had been passed. (*b*) There may be acute fatty degeneration of the newly-born. Buhl, in 1861, first described this rare disease, but it is very doubtful whether it is really a definite disease at all. The symptoms are as follows. The child is born in a state of asphyxia without obvious cause. There are cyanosis, blood extravasation under the skin or mucous membrane of the mouth or conjunctiva, jaundice, general œdema, hæmorrhage during the separation of the cord or from the stomach and bowels, and death occurs in two weeks. As all these symptoms except the gastro-intestinal hæmorrhage were absent this was not a case of this disease. (*c*) There may be hæmophilia, but there was no family history of this nor was there any other hæmorrhagic tendency in the child beyond that described—e.g., the cord separated without any bleeding. (*d*) Vomiting and the passage *per rectum* of swallowed blood either from the mother's nipple or from some lesion of the child's mouth or nose may occur, but in this case there was nothing of this kind present. (*e*) There may be ulceration of the duodenum or stomach, as described by Dr. Goodhart and others. In that case hæmatemesis would have been a more pronounced symptom than it was in my case, where it only occurred once. These cases are always fatal. (*f*) Intussusception may occur, but then there would be no hæmorrhage from the stomach and a tumour would be present, and mucus as well as blood would have been found in the stools. (*g*) Congestion of pelvic veins due to a cessation of the circulation in the cord when it was tied might have been another condition, but then the hæmorrhage would have come on directly after birth and would have been accompanied by discharge of blood *per vaginam* from the same cause—i.e., pelvic congestion. Lastly, there may be (*h*) hæmatemesis and melæna neonatorum, and this is the class in which I place this case. The symptoms are simply those which are implied in the name—the passage of blood by the rectum and the vomiting of it in newly-born children. The pathology in this condition is obscure; the necropsy in these cases simply reveals a very much congested condition of the gastro-intestinal mucous membrane without any discoverable cause. Sometimes even this congestion is not seen and no abnormality whatever can be found.

The usual treatment of such cases is by the administration of hæmostatics, such as ergot, perchloride of iron, &c., but the majority prove fatal in spite of all attempted remedies. I gave my patient very frequent 5 gr. doses of calcium chloride. On the first day of the bleeding none was given; on the second day eight doses of 5 gr. were administered every hour through the day and then every two hours through the night; on the third day the same; and on the fourth day every two hours through the day. The drug was then stopped as the bleeding had ceased for twenty-four hours. Altogether the child took 160 grains in three days. The hæmorrhage began to lessen twenty-four hours after its exhibition and ceased completely in forty-eight hours. The resulting anæmia was treated in the usual way by the administration of iron. A practical point to note is this. I warned the mother not to worry if the stools turned black-coloured and it was just as well I did, for she said she would certainly have thought the colour, which was due to the taking of the iron, arose from a recurrence of the bleeding unless she had been prepared. I cannot say whether the stoppage of hæmorrhage was *post* or *propter* the giving of the calcium chloride, but certainly the bleeding ceased soon after its exhibition and I should use it again in a similar case. I have often tried it in other forms of hæmorrhage—e.g., epistaxis, bleeding from tooth socket, &c.—but this is the first case in which I have seen any benefit after its employment.

Bartholomew-road, N.W.

## THE SPONTANEOUS OCCURRENCE OF A VESICAL FISTULA IN THE GROIN IN A CASE OF PARAPLEGIA WITH RETENTION OF URINE.

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THE following case exemplifies a remarkable and exceedingly rare result of prolonged retention of urine with overflow and cystitis. For permission to publish the notes I am indebted to Sir William Gowers.

A man, aged forty-eight years, was admitted into the National Hospital for the Paralysed and Epileptic, under the care of Sir William Gowers, on May 24th, 1898, complaining of partial paralysis of both legs and that his urine ran away from him through a hole in the right groin. His family history was unimportant. His previous health had been good. Some years ago he had an abscess in the jaw and another in the left groin. He had never suffered from lead-poisoning.

In June, 1896, the patient was seized with pain in the right leg like "rheumatics." The leg became weak and he commenced to drag it in walking. At the end of a week he had to give up his work on account of pain and weakness in both legs. He was then taken into Charing-cross Hospital, where the bladder was found to be distended. At the end of a fortnight he had completely lost all power in the right leg and nearly all in the left leg and in either leg he could not feel when he was touched. He lost all control over both

sphincters and developed cystitis. Since this time he had had no pain. He remained in hospital for seven months, where the bladder was kept clean with regular catheterisation and irrigation. His condition of paraplegia did not improve in the hospital but the feeling returned in his legs to some extent.

On leaving Charing-cross Hospital the patient returned home and was treated by his own medical attendant. No instrument was passed and for five months the patient's urine constantly dribbled away. He says he could during this time always feel a round swelling (the distended bladder) above the pubes, but he had no pain. The urine was very offensive. At the end of this time (July, 1897) a small hard lump appeared in the right groin; it was tender and in a few days burst, letting out some pus and a good deal of offensive urine. Since this time the whole of the urine had been voided through the opening in the right groin. He had passed nothing *per urethram* except a little pus occasionally. For the last nine months he had been regaining power in the legs and his sensation had improved greatly, but he was still unable to stand.

The present state of the patient is as follows. He is a sparsely-nourished, sallow-faced man. He complains of no pain. His appetite is good and his temperature is normal. The mental state, speech, special senses, optic discs, cranial nerves, upper extremities and trunk muscles are normal. The spine presents no peculiarities. The lower extremities are rigid at all joints and in all positions. Both feet are dropped and there is some contracture of the calf muscles. There is considerable adductor spasm and the legs are frequently drawn up reflexly. He can flex, extend, abduct, and adduct both hips, but slowly and stiffly. He can flex and extend the knees and can flex the ankles and toes. He cannot dorsiflex the ankles. The legs are rather thin and the muscles are small, but there is no localised wasting. He cannot stand or walk. There is slight diminution of tactile sensibility below the knees on either side, but light touches and pricks are felt everywhere. As regards the sphincters, there is reflex incontinence of fæces. No urine is passed *per urethram*. A No. 16 silver catheter can be passed without much difficulty. The prostate is enlarged. The plantar reflexes are exaggerated and equal. The knee-jerks are exaggerated and equal. There is double foot and double rectus clonus. The heart, lungs, and abdominal viscera present no peculiarities. In the right groin, just above and external to the pubic spine, there is a sinus about 3 in. long. The track begins external to the spermatic cord and then passing behind it opens into the front and right lateral aspect of the bladder. The skin for some inches round this sinus is raw and covered with large moist papules. Urine is constantly dribbling from the sinus. About 3 oz. of dark brown very offensive urine were removed from the bladder by the catheter. On careful examination no signs of the presence of a calculus were found. The bladder is small and contracted. When empty not more than 3 oz. of fluid can be made to enter the bladder even under the pressure of 3 ft. of water.

The origin of the fistula was probably a slough of the bladder wall resulting from the long-continued distension and cystitis followed by a peri-vesical abscess confined by progressive conservative processes and extending underneath the peritoneum to the right groin. It seems unlikely that extravasation of urine into the pre-vesical space with the formation of a secondary abscess had occurred, since at no time had he absolute retention of urine and the signs immediately preceding the bursting of the abscess were quite local. The absence of marked pain and discomfort when these processes were going on and when the patient himself distinctly remembers that he could feel touches perfectly well all over the inguinal regions is remarkable. There was probably such blunting of sensibility from the myelitis that although he could feel touches and distinguish a pin point readily he was unable to feel more severe painful impression in a natural degree, a condition which is not infrequently seen in lesions of the spinal cord interfering with sensation.

CARDIFF.—At the meeting of the Cardiff Board of Guardians held on June 18th it was resolved to accept a tender for £2330 for the erection of a new infants' wing at the workhouse.—Dr. S. W. Wheaton, of the Local Government Board, held an inquiry at Cardiff on June 28th into an application of the Cardiff Corporation for sanction to borrow £21,600 for the erection and furnishing of new wards at the borough sanatorium for infectious diseases.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

**Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.**

## NORTH-EASTERN HOSPITAL FOR CHILDREN.

### A CASE OF PORENCEPHALUS SIMULATING A DEPRESSED FRACTURE OF THE SKULL WITH A CEPHALHÆMATOMA; NECROPSY.

(Under the care of Mr. H. P. DEAN.)

FOR the notes of the case we are indebted to Mr. J. H. de Villiers, late house surgeon to the hospital.

The patient was a female child, aged four months. There was nothing of note in the family history and in particular there was no evidence of epilepsy or other forms of nervous trouble. The mother had had five other children, all of whom were healthy, and there had been one miscarriage, after the fourth child. With regard to the previous history, the patient was a full-term child (vertex presentation) and the membranes were ruptured thirty-six hours before birth; no forceps were used. A few days after birth the mother noticed a small depression over the right side of the skull, but, thinking that it was due to pressure, she took no more notice of it. It was said that there had been slight wasting since birth, but otherwise nothing wrong was noticed. There were no convulsions. The child was fed from the breast. On Sept. 21st, at 1 A.M., the mother fell down with the infant in her arms; she was unable to say whether the child's head struck against any object, but immediately afterwards she noticed a large swelling extending over the right side of the head. The child was taken to the hospital within a quarter of an hour of the accident; she was found to be unconscious, pale, and collapsed and was immediately admitted. On further examination the child was found to be a healthy-looking and well-nourished infant. Over the right parietal region a large, tense, fluctuating, but not pulsating, swelling presented, covered by normal scalp, which showed no signs of bruising or discolouration. Immediately in front of the swelling, at the junction of the parietal, frontal, and temporal bones, was a small depression simulating a depressed fracture. Both pupils were active to light, but the right was larger than the left; there was no strabismus, but it was impossible to test the ocular movements. No difference in the two sides of the face was detected. The right arm and leg were rigid and the left appeared to be normal. Nothing definite could be made out about the knee-jerks. The temperature was 98° F. From the symptoms the case was considered to be one of depressed fracture of the skull with a cephalhæmatoma. The following is a copy of the notes of the progress of the case. At 6 A.M. the patient was still unconscious. The temperature was 97·6° F. By 10 A.M. the temperature had risen to 100°; the patient was sick twice and was still unconscious. On the 22nd she was sick twice. At 10 A.M. the temperature was 101·6°; otherwise the condition was unaltered. On the 23rd there were marked irregular twitchings of the right arm and leg and complete paralysis of the left arm and leg; no difference in the two sides of the face was detected. The temperature ranged between 102·4° and 99°. On the 24th the child seemed to be conscious, the pupils were equal, and she took milk fairly well. On the 26th the swelling was less tense, and through the swelling two ridges of bone could be felt running from before backwards about an inch apart. The temperature varied from 103° to 100°. On the 30th the temperature was lower, the child seemed to take more notice of her surroundings, and she took food well. On Oct. 1st, at 2 A.M., the temperature was 101·6° and at 10 A.M. 97·6°; rigidity was more marked on the right side; the left side was unaltered. From this date to the 6th the temperature had only on one occasion reached 100°. The child had vomited twice; she seemed much brighter, but otherwise she was unchanged. The patient was sick once on the 7th and twice on the 8th; her temperature was normal. She

was sick once on the 10th and twice on the 12th, the temperature varying between 97·4° and 98°; otherwise her condition was unaltered. From the 12th to the 22nd there was nothing of note; if anything the rigidity seemed to be less marked; there was no vomiting. The temperature on the latter date was normal. On the 23rd and 24th some diarrhœa occurred, which improved under treatment. On the 25th the temperature was normal. On the 29th, as the child's local condition remained unaltered, Mr. H. Percy Dean made an exploratory incision under chloroform. Immediately on making the skin incision a quantity of cerebro-spinal fluid gushed out. Over an area of about the size of a florin the covering of the cavity inside the brain was extremely thin and at one spot was adherent to the scalp. The margin of the aperture thus made was ragged and seemed to be composed of very degenerated grey cortex. When the flap was completely turned down it was noticed that the right parietal bone was divided into two almost equal halves by a fissure nearly an inch in breadth running from its anterior to its posterior margin and ending anteriorly in the depression before noticed. Beneath the fissure could be seen a smooth-walled cavity evidently in the brain substance; on the floor of this cavity was noticed an opening of sufficient size to admit the little finger, and on passing a probe through the opening it was found to enter the right lateral ventricle. The case was considered to be one of porencephalus, so the skin incision was closed with silkworm gut and dressed with cyanide gauze. The temperature at 2 P.M. (before the operation) was 98°; at 6 P.M. it had risen to 101·4°. On the 30th the general condition was worse. The temperature at 2 A.M. was 100·6° and by 2 P.M. it had risen to 104·6°. The cerebro-spinal fluid was gradually draining away. The patient was sick four times. On the 31st the temperature at 2 A.M. was 100·4°, at 6 P.M. it was 102·4°. Cerebro-spinal fluid was still draining away. The patient was sick four times. On Nov. 1st her general condition was much worse. The temperature at 6 A.M. was 102·2° and the child died at 3 P.M. The temperature just before death was 100·8°; otherwise there was nothing of note.

*Necropsy.*—A post-mortem examination of the head only was allowed. A widely gaping fissure, running from the anterior to the posterior border, divided the right parietal bone into upper and lower parts of almost equal size. The fissure was closed in its anterior and in its posterior third by united dura mater and periosteum, but the middle third was open, the opening being 2 in. by ¾ in. wide. At the margin of the opening brain matter, membrane, and periosteum were fused together and in a thin layer. Beneath the dura mater, in the upper margin of the opening there were the remains of an old hæmorrhage. Only a thin layer of tissue, evidently the thickened ependyma, prevented the greatly dilated descending horn of the right lateral ventricle from opening at the fissure in the parietal bone. There was no sign of inflammation in the wall of the cavity—in fact, no evidence of septic infection of any kind in the brain or on its surface could be detected. The first frontal convolution, the upper two-fifths of the ascending frontal and ascending parietal, the superior parietal and occipital convolutions were present on the right side. The mesial aspect of the right hemisphere showed a normal arrangement and development of convolutions and fissures. The lower three-fifths of the ascending frontal and parietal convolutions were absent, so were the angular supra-marginal gyri and the part of the posterior parietal adjacent to the angular gyrus; all these convolutions with the first temporo-sphenoidal were involved in the mixed mass of tissue which surrounded and bound the opening in the parietal bone. The second and third temporo-sphenoidal convolutions were long, small ridges, crushed together towards the cerebellar aspect of the temporo-sphenoidal lobe. On the left side the third frontal convolution was well developed, but on the right, although an anterior limb of the fissure of Sylvius was distinctly present, it was impossible to distinguish a distinct third or second frontal convolution, both being represented by a narrow mass of fine convolutions. The island of Reil on the right side was half the size of that on the left; its central sulcus was merely indicated, it had two slight convolutions in front of the central fissure and only one behind it; the island was exposed, the operculum being so slightly developed.

*Remarks by* Mr. DE VILLIERS.—I have endeavoured to describe this case clinically, not pathologically, especially as no examination of the cord was allowed. Writers on the subject have expressed very diverse views as to its nature. Anyone interested in the subject will find references to other published cases and papers in the following:—Kundrat: Die Porencephalie: eine Anatomische Studie, Gray, 1882; Audry: Les Porencéphalies, *Revue de Médecine*, June and July, 1888; and Norman and Fraser: A case of Porencephaly, *Journal of Mental Science*, October, 1894. By the kind permission of Mr. Dean I am allowed to publish this case.

*Remarks by* Mr. DEAN.—When the child was seen by me for the first time about three days after admission the symptoms of collapse had subsided and I regarded the condition as one of gradual recovery from a severe contusion and probable laceration of the brain together with either a cephalhæmatoma or traumatic meningocele (meningocele falsa). There were no symptoms of compression of the brain, and as the child seemed to be distinctly improving I decided not to operate at once but to wait a few days before exploring the swelling. At the operation, as soon as the flap of scalp was reflected, the condition was obviously a long-standing one. The only evidence of any recent mischief was the small blood-cyst found at the upper part of the wound. Possibly this was the result of the recent accident, but on the whole I was inclined to think that it was considerably older than this. On enlarging the accidental tear in the thinned-out cerebral cortex a huge cavity was found which I have no doubt belonged to the group known as porencephalus. Using this term in its widest application it may be said to include two distinct conditions: (1) a mal-development of the brain at a fairly early stage of embryonic life; and (2) some extensive lesion, probably vascular in origin, during the later stages of intra-uterine life or at or after birth. This last condition is sometimes called pseudo-porencephalus. In deciding to which group any case belongs there are the following points to consider:—1. Whether the cavity communicates with the lateral ventricle. As a rule in pseudo-porencephalus there is no communication, whereas in congenital porencephalus there is always a communication, usually of about the size which would admit the little finger as in this particular case. Occasionally, in pseudo-porencephalus there is a communication due to an unusually extensive destructive lesion and in such cases the communicating aperture is much larger than in the true cases. 2. In pseudo-porencephalus the cerebral convolutions around the margin of the cavity are quite irregular in distribution, such as one would expect from an extensive hæmorrhage. In true porencephalus the convolutions though malformed are fairly regular in shape and distribution. 3. In true porencephalus the thin layer covering the cavity on its superficial aspect is composed of imperfectly developed brain tissue, whereas in pseudo-porencephalus the lining membrane and the superficial covering are composed of organised tissue containing little or no evidence of its nervous origin. On the whole, therefore, it is fairly clear that this case belongs to the group of true porencephalus and that death was due to alteration in the vascular mechanism of the brain produced by the draining away of cerebro-spinal fluid and to other conditions.

## ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

### A CASE OF TRANSPERITONEAL LIGATURE OF THE EXTERNAL ILIAC ARTERY FOR ANEURYSM OF THE COMMON FEMORAL; CURE.

(Under the care of Mr. FREDERICK PAGE.)

ALTHOUGH, as Mr. Page mentions in his remarks, many of the text-books on operative surgery do not describe transperitoneal ligature of the external iliac, yet the subject has not by any means been entirely neglected. A very good account of the operation is given by Mr. Jacobson[1] and by Mr. Treves.[2] Mr. Page refers to Mr. Makins's case in 1892, but he may be interested to know that in the same patient subsequently a similar aneurysm appeared on the other side of the body, and, further, Mr. Makins tied in 1893 the other external iliac, so that in this case both external iliacs were tied with success. Mr. Jessop's case was mentioned in a paper read before the Leeds and West Riding Medico-Chirurgical Society on Nov. 2nd, 1894, and it was reported in THE LANCET of Nov. 17th, 1894, p. 1142. The

[1] The Operations of Surgery, third edition, p. 612.
[2] Operative Surgery, vol. i., p. 211.

question of transperitoneal or extra-peritoneal operation for the ligature of all the iliac arteries is practically the same, though the arguments in favour of the transperitoneal method are especially strong in the case of the common and the internal iliacs, and it has been urged[3] that the ordinary operation for ligature of the external iliac is so simple that it is undesirable to employ the transperitoneal method for this vessel. Mr. Page's case is of great value, as it shows how simple is the transperitoneal operation, and it is very probable that this method will be more commonly employed in the future. It requires care that the wound is kept aseptic, but that is equally true of the extra-peritoneal method, for if suppuration should appear outside a peritoneum which has been stripped up sloughing is not unlikely to ensue. As to the material of the ligature we cannot see why any harm should arise from aseptic silk.

A man, aged forty-seven years, was, on March 10th, 1898, admitted to the Royal Infirmary, Newcastle-upon-Tyne, under the care of Mr. Frederick Page, suffering from aneurysm of the left common femoral artery of three months' duration. The patient complained of pain and stiffness in his left groin and of pain on the inner aspect of his knee and said that he was unable to use his left leg. There was an aneurysm of the common femoral as large as an orange. Nine years ago he suffered from rheumatic fever. He had now "a very soft aortic systolic and a mitral regurgitant murmur." He had led an irregular life, but had never had syphilis. On March 17th the abdomen was opened by an incision 3 in. long, commencing 1 in. above Poupart's ligament, parallel to and just outside the sheath of the rectus. The intestines and omentum were then packed off by means of sponges and free access was obtained to the vessel, round which a catgut ligature was readily passed and tightly tied. Pulsation in the aneurysm at once ceased. The abdominal wound was closed in layers, the limb was wrapped in cotton wool, and the patient was removed to bed. No constitutional disturbance followed the operation and the wound healed by first intention. On the 19th pulsation returned in the aneurysm, but it was much diminished on the 20th and wholly absent on the 21st, since which date there has been no return. The patient left the infirmary on April 12th cured and is now quite well.

*Remarks by* Mr. PAGE.—On Sept. 20th, 1892, Mr. Makins at St. Thomas's Hospital and Mr. Mitchell Banks at the Royal Infirmary, Liverpool, in two patients suffering from aneurysm of the common femoral tied the external iliac artery through the peritoneum and both cases were cured. Since then the vessel has been twice, at least, tied by the same method, once by Mr. Brown at Leeds in 1893, and once by Mr. Coppinger of Dublin in 1894, for aneurysm of the common femoral. In Mr. Brown's patient, a fat subject, there were two aneurysms, gangrene followed, and the patient died after amputation. Mr. Coppinger's patient was cured, so that with mine, 5 cases have been recorded as operated upon by this method and 4 of them have been successful. I understand that Mr. Brown of Leeds tied the vessel a second time by the same method last year. Mr. Jessop of Leeds has also once done so, but I have not been able to find reports of these two cases. I notice that most of the text-books on operative surgery do not describe transperitoneal ligature of the external iliac. In the last edition of Erichsen it is stated that "the surgeon may resort to ligature of the vessel through the peritoneum in those cases in which Astley Cooper's operation is impracticable." Mr. T. Holmes, who advocates pressure before ligation of the external iliac where practicable, says that wound of the peritoneum "is not necessarily attended with fatal or even with serious consequences; in fact, a successful case was lately published in which the peritoneum had been divided by mistake for the transversalis fascia to the extent of the external wound, but any injury to the peritoneum should nevertheless be most carefully avoided." I take it, therefore, the general surgical opinion still is that extra-peritoneal ligation of the external iliac is the operation which should be selected, the trans-peritoneal method only being resorted to where extra-peritoneal ligation is impracticable. My own experience is far too limited to allow me to express an opinion on the relative merits of the two procedures. I have tied the external iliac twice for aneurysm of the common femoral, once by the extra-peritoneal and once by the transperitoneal method. Both cases did well. Should I ever have occasion, however, to tie the external iliac again for an aneurysm of the common femoral I should certainly, without any hesitation, select the transperitoneal operation, tying the vessel tightly with a catgut ligature. Mr. Makins, Mr. Brown, and Mr. Coppinger all tied the vessel tightly with a silk ligature. Mr. Mitchell Banks used a catgut ligature and did not tie it tightly. Eleven days after operation his patient became suddenly alarmingly ill from what seems to have been embolism, but she recovered. I am rather surprised to find that no inconvenience arose from the use of the silk ligatures. I should expect that silk would be more liable to give rise to subsequent trouble than catgut. What is the best ligature and what is the best method of its application to an artery in continuity are points, among many others, in the treatment of aneurysm which it would be most interesting and instructive to hear debated by surgeons who have had considerable practical experience in this department of surgery. Much has happened since 1870 when the late Dr. G. Y. Heath, in his address on Surgery at the meeting of the British Medical Association in Newcastle-upon-Tyne, contrasted the relative merits of pressure and the ligature in the treatment of aneurysm in the following terms: "I should rather leave to those who best know what dangers encompass him who is submitted to the knife and the ligature—the shock, the suppuration, the erysipelas, the pyæmia, the gangrene, and the secondary hæmorrhage—the appraisement of a measure which after a few hours' sleep leaves the awakened patient free from his disease, with no wound to heal, no further risk to run, and to say whether any surgical proceeding ever more truly deserved the application of the old maxim, *Cito, tute et jucunde*."

[3] Mr. Clement Lucas, Brit. Med. Jour., Nov. 5th, 1892, p 1033.

# Medical Societies.

## OBSTETRICAL SOCIETY OF LONDON.

*The Sagittal Fontanelle.—Fronto-anterior Positions of the Head.—Acute Bedsore following Parturition.—Exhibition of Specimens.*

A MEETING of this society was held on July 6th, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. ARNOLD LEA read a paper on the Sagittal Fontanelle in the Heads of Children at Birth. He stated that abnormal fontanelles had been known to be present in the head of the fœtus at birth for many years; several of these membranous spaces had been described (naso-frontal, cerebellar, medio-frontal, sagittal), of which the most interesting to obstetricians was the sagittal fontanelle, first described by Gerdy in 1837. Dr. Lea's observations were based upon the examination of 500 consecutive cases at birth. The sagittal fontanelle was situated 2 cm. in front of the posterior fontanelle on a transverse line drawn between the two parietal eminences. Its average length was 1½ cm. and width 1 cm. It might form a space as large as the anterior fontanelle or it might be developed on one side only. The edges of the membranous space were usually formed of well-developed bone, but at times there was deficient ossification of the posterior part of the parietal bone. He had found the membranous space present in 4·4 per cent. of his cases; he had not included those in which there was only a notch in the parietal bone. The fontanelle was bilateral in 17 cases and unilateral in 5 cases; in 4 instances it extended up to the parietal eminence on each side. A description was given of the development of the parietal bones and of the obstetric and medico-legal interest of the fontanelle and of its effect in facilitating moulding of the head.—Dr. HERMAN said that two practical points arose out of the laborious and careful investigation of Dr. Lea. The first was that a sagittal fontanelle might mislead one who diagnosed the fœtal position by feeling the sutures and fontanelles. But this would not trouble anyone who was accustomed to diagnose the position by abdominal palpation. The second was that a sagittal fontanelle indicating backward ossification might invite a trial with forceps in a case which with a very hard head would call for perforation.—Dr. HERBERT SPENCER expressed surprise that the fontanelle had been found in 4·4 per cent. of cases. He asked Dr. Lea whether his observations were clinical or post-mortem. He (Dr. Spencer) was well acquainted with fissures in the parietal

bone which were common and every obstetrician knew how depressible the upper edge of the parietal bone often was; what was really only a fissure might therefore appear to the examining finger as a space; but having carefully examined the skulls of over 300 new-born infants post mortem he had not met with one instance of a sagittal fontanelle at all comparable to the anterior fontanelle. He had, however, met with parietal fenestra and with insular ossification and absence of ossification in the parietal bones of the mature fœtus. He had no doubt that as a considerable anatomical space the sagittal fontanelle occurred with much greater rarity than that stated by Dr. Lea.—The PRESIDENT said it would no doubt have been quite as much a surprise to the Fellows generally as it had been to him to learn that a genuine sagittal fontanelle had been found in so large a proportion of cases. He thought that the liability of this extra fontanelle to be mistaken for a fracture the result of violence had an important medico-legal bearing.—Dr. LEA, in reply, stated that the percentage of cases of parietal fontanelle observed by him was similar to that of M. Hemy. In children some months old instances in which it remained open were not uncommon. He had examined two cases in which the infants died soon after delivery.

Dr. GEORGE ROPER read a note on some Difficult Cases of Fronto-anterior Positions of the Fœtal Head. He stated that after an extensive experience in difficult labours he never felt satisfied with the knowledge he had of the difficulties connected with the fronto-anterior positions of the fœtal head in labour. With a child beyond average size or with a small or misshapen pelvis considerable difficulties occurred. He referred to the description of the labour in Dr. Herman's book on Difficult Labour and stated his opinion that the difficulty was due to the position of the child's trunk. He (Dr. Roper) recommended after a moderate trial with forceps podalic version in the treatment of these cases and showed an instrument he had devised for facilitating traction on the leg.—Dr. HERMAN thought that Dr. Roper had done service in calling attention to the fact that the mechanism of delivery did not depend only upon the relation of the head to the pelvis. The position of the trunk caused extension of the spine, which led to extension of the head. Also, as Dr. Roper had pointed out, the fœtus would enter the pelvis more easily when its concave abdominal aspect was applied to the mother's lumbo-sacral convexity.—Dr. HORROCKS said that he agreed that the tendency in these cases was at first towards extension, but after further descent into the pelvis the head tended to be flexed by the uterine forces. The treatment depended upon the mobility of the fœtus: when there was little or no mobility the proper treatment was not rotation or version but craniotomy.

Dr. BLACKER read a communication on a case of Acute Bedsore following Parturition.

The following specimens were shown:—

Dr. PEMBREY: Five Cake-like Bodies (containing fœtuses) which were found free in the Peritoneal Cavity of a Large Rabbit.

Dr. J. D. MCCAW: A Cystic Fibro-myoma of the Uterus removed by Laparotomy from the Uterus in the Middle of Pregnancy; delivery at term.

Dr. WISE: Ovum with Hæmorrhage into the Placenta.

Dr. TATE: Uterus removed by Vaginal Hysterectomy.

Dr. HERBERT SPENCER: Ovarian Dermoid which, Incarcerated in the Pelvis, was pushed up in the Middle of Pregnancy and Removed after Delivery at Term.

## OPHTHALMOLOGICAL SOCIETY.

*Subconjunctival Blood-letting for Hæmorrhagic Retinitis.—The Mechanism of the Conjugate Movements of the Eyeballs.—Large Clear Cyst of the Conjunctiva.—Chancre of the Lacrymal Sac.—Exhibition of Specimens.*

A MEETING of this society was held on July 8th, Mr. H. R. SWANZY, President, being in the chair.

Mr. RICHARDSON CROSS read a paper on Subconjunctival Blood-letting for Hæmorrhagic Retinitis. Recognising the fact that a considerable amount of blood escaped from the wounded vessels in squint and other subconjunctival operations without any ill-effect Mr. Cross determined to try the effect upon intraocular hæmorrhage or congestion of a more or less free division of the blood-vessels running along the muscles and in the subconjunctival tissue. For this purpose he made free incisions beneath the conjunctiva either between the inferior and internal recti or between the superior and external recti; the incisions were followed by the use of hot fomentations. From the result of this kind of interference in several cases Mr. Cross felt justified in recommending this plan of abstracting blood from the branches of the ophthalmic artery. In one case in which there were numerous retinal hæmorrhages round the disc, with much congestion of the retinal vessels and some optic neuritis, leeches and general medical treatment had been applied without benefit and vision was reduced to $\frac{5}{60}$. Free incisions were made into the subconjunctival tissue with strabismus scissors so as to lacerate as many vessels as possible and warm fomentations were afterwards applied. The next day the pupil was dilated and there was marked diminution in the swelling of the disc, with an improvement in vision. This improvement was steadily maintained and the vision was eventually completely restored. Several other cases were quoted in which considerable improvement resulted.

Dr. ALDREN TURNER read a paper on the Mechanism of the Conjugate Movements of the Eyeballs. He showed that there was accumulating evidence in favour of the sixth nerve nucleus being the lower or pontine centre for the associated action of the internal and external recti muscles and that the fibres from the sixth nucleus of one side probably passed directly into the third nerve of the opposite side, without the intervention of cells in the third nucleus, facts which indicated that the internal recti were doubly innervated—on the one hand from the third nucleus for convergence and on the other from the sixth nucleus for lateral movement. Respecting the path by which impressions were conveyed from the cerebral cortex to the sixth nucleus he referred to an experiment in which the tegment of the pons was divided without interference with the sixth nucleus. As a result conjugate deviation of both eyes to the opposite side, with inability to move them to the side of the lesion, was observed. The conclusion drawn from this observation was that the cortico-pontine fibres decussated in the neighbourhood of the quadrigeminal bodies and passed downwards in the tegment of the pons to the sixth nucleus.—The PRESIDENT made some observations on the position of the nuclear centre for convergence and on the probability of there being not one but several cortical centres for conjugate movements of the eyes.—Mr. JESSOP thought that absence of convergence was a very rare condition; he knew of only one case in a boy subject to epileptic fits. He had advanced both internal recti with the result that the boy now had several metre angles of positive convergent power.—In reply Dr. TURNER stated that he had only seen one case of paralysis of convergence, while the conjugate movements were unaffected. He referred to the loss of pupillary contraction on attempts at convergence in that case, while the pupillary light reflex was retained. This phenomenon was the converse of the Argyll-Robertson pupil.

Mr. SIMEON SNELL (Sheffield) related particulars of a case of Large Clear Cyst of the Conjunctiva. The cyst was as large as a hazel nut; it was concealed almost entirely by the lower eyelid, but when the lid was drawn down it bulged forward. The patient was twenty-three years of age; the cyst had been noticed since childhood but was then quite small. Ten months before coming under observation he was struck over the cyst, which enlarged and became bluish in colour; before this it was transparent. Microscopical examination of the cyst, made by Mr. Treacher Collins, showed it to be lined throughout by a single layer of endothelial cells, outside which was some moderately dense fibrous tissue with patches of round-celled infiltration in it. The cyst was probably lymphatic in origin.

Mr. SIMEON SNELL also related a case of Chancre of the Lacrymal Sac. The patient sought advice for what he deemed subacute inflammation of the lacrymal sac. When seen there was no ulceration of the sac, but there was a more than usually defined margin to the swelling. There was nothing to suggest a primary lesion. Later the canaliculus was slit up and the duct probed with some slight relief; afterwards a macular syphilide appeared on the chest and arms with ulceration of the tonsils. Presuming the lesion of the lacrymal sac to be a primary sore the secondary symptoms appeared in correct sequence as to time, the first swelling of the sac being noticed on April 3rd and the rash appeared on May 13th. The thickening of the sac and the rash quickly dispersed under mercurial treatment.

The following living and card specimens were shown:—

Mr. RICHARDSON CROSS: Plastic Operation for Contracted Socket.

Mr. ERNEST CLARKE: Pigmented Mole of the Face and Eyelids.

Mr. ADAMS FROST: Case of Pseudo-glioma.

Mr. MARCUS GUNN: Preparation of a Sclerosed Retinal Artery.

The following are the officers and council of the society who were elected to serve for the session 1898–99:—President: Mr. H. R. Swanzy. Vice-Presidents: Sir W. R. Gowers, F.R.S., Dr. D. Argyll Robertson (Edinburgh), Mr. R. Marcus Gunn, Mr. R. Williams (Liverpool), Mr. E. Nettleship, Mr. Henry Eales (Birmingham), *Dr. W. A. Brailey, *Mr. Priestley Smith (Birmingham), *Mr. F. Richardson Cross (Clifton), and *Mr. George Cowell. Treasurer: *Dr. John Abercrombie. Secretaries: Dr. James Taylor and *Mr. E. Treacher Collins. Librarian: Mr. W. Adams Frost. Other members of council: Dr. Arthur P. L. Wells, Dr. L. H. Tosswill (Exeter), Dr. C. E. Glascott (Manchester), Dr. Arthur W. Sandford (Cork), Mr. Charles J. Oldham (Brighton), Dr. Howard H. Tooth, Dr. W. A. Turner, Dr. G. E. Wherry (Cambridge), Dr. S. H. Habershon, *Mr. J. B. Lawford, *Mr. W. J. Cant (Lincoln), and *Mr. Sydney Stephenson. The gentlemen whose names are marked with an asterisk were not on the council, or did not hold the same office, during the preceding year.

# Reviews and Notices of Books.

*A System of Medicine.* By Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D. Cantab., LL.D. Glasg., F.R.S., F.R.C.P. Lond., &c. Vol. V., Diseases of the Respiratory and Circulatory Systems. London: Macmillan and Co. 1898. Price 25*s.* net.

THE appearance of another volume of this notable work will be welcomed by many a practitioner and student. A striking feature is the large number of contributors which the editor has secured; several fresh names appear in the present volume which completes the Diseases of the Respiratory System and embarks on those of the Circulatory System. Needless to say that the work continues to maintain the high level of excellence of the previous volumes. Dr. W. Ewart opens with an article on Bronchitis which is admirably arranged and clearly expounded. We note his reference to the frequent association of bronchitis with pleurisy and his statement that this "pleuro-bronchitis" is often of rheumatic origin. In speaking of plastic bronchitis—an affection of such rarity as to be regarded as almost one of the curiosities of pathology—Dr. Ewart is unable to give much encouragement in the use of solvent treatment of the false membrane. There is a section on Putrid Bronchitis—another affection of some pathological obscurity. The treatment of bronchitis is discussed at some length, being followed by judicious remarks upon prophylaxis. The article on Bronchiectasis is from the same pen and is especially interesting from the breadth of view taken on the subject. Attention is drawn to the recently described condition of "acute bronchiectasis in children," or, as Dr. Ewart terms it, "bronchiolectasis," the illustrations of the condition published by Dr. Sharkey being reproduced. The etiology of bronchiectasis is amply discussed, the author stating views at which he has himself arrived which afford a rational explanation of its occurrence. The signs, symptoms, associated conditions, and the differential diagnosis are well described, but perhaps the most noteworthy feature of the article is the opinion expressed that the treatment of bronchiectasis has of late entered on a new era in the introduction of garlic as an internal remedy by Dr. Vivian Poore, the employment of intratracheal injections and the systematic inhalation of creasote as proposed and carried out by Dr. Chaplin. Surgical treatment by incision and drainage is regarded as a closed chapter in the history of pulmonary therapeutics. The important subject of Pneumonia is dealt with by Dr. Pye-Smith in an article the value of which is enhanced by an appended analysis of 434 cases of the disease from the records of Guy's Hospital and other sources. Dr. Pye-Smith departs, and we think wisely, from the routine order of descriptions of diseases in discussing the clinical features of the disease before entering on its pathology and etiology. He gives a sufficiently detailed account of the present state of knowledge of its bacteriology, and we note that he thinks that there is sufficient evidence for continuing to accept the common belief in the agency of cold in the production of the affection. The historical sketch he gives of the treatment of pneumonia is very interesting. Dr. Pye-Smith also writes upon Catarrhal Pneumonia and Chronic Pneumonia, or pulmonary cirrhosis, which he does not think ever arises directly from lobar pneumonia (p. 49). We miss any separate article upon gangrene of the lung, although, of course, reference is made to this sequel of acute pneumonia in the description of that disease. Dr. Percy Kidd writes upon Phthisis Pulmonalis. In his discussion of the causes of this prevalent malady he shows clearly that the undoubted and progressing diminution in its mortality is to be ascribed in great measure to improved conditions of dwelling rather than to states of soil. This section of his article is very well planned. We would especially mention his treatment of the vexed question of heredity, which has assumed a new aspect since the recognition of the infectivity of tuberculosis has become universal. His summary on the matter, that "the only conclusion at present warranted is that direct inheritance is of decidedly subordinate importance to extra-uterine infection, however acquired," will be assented to by all who have studied the subject. He next describes the pathological anatomy of the disease and divides his consideration of the symptoms under the heads of (*a*) *Acute*, comprising the lobar-pneumonic form, the broncho-pneumonic form, and acute miliary tuberculosis; and (*b*) *Chronic* pulmonary tuberculosis. Five modes of invasion of chronic phthisis are discriminated—namely, the insidious, the bronchitic, the pleuritic, the hæmoptoic, and the laryngeal. The symptoms and physical signs are admirably sketched and there is a very full account of the various complicating conditions. Under treatment a first place is given to preventive measures and indeed the whole article is a model one. To Dr. Arlidge has been assigned the subject of Pneumoconiosis, a field in which he is an acknowledged authority. At the same time we doubt if sufficient stress is laid upon the frequency with which tuberculous invasion is responsible for the destructive lesions of "dust-phthisis." Of the gravity of the inhalation of dust as a factor in the production of disintegration of the lung none can be ignorant, but yet it may well be that the changes which it initiates render the lungs vulnerable to the attacks of the tubercle bacillus. Dr. Rolleston contributes a description of Pulmonary Aspergillosis in an article which will probably rank as the standard account of a rare condition. Dr. J. Kingston Fowler writes upon Emphysema of the Lungs and also on Syphilitic Disease of the Lungs. Both articles are very careful productions, the latter especially, introducing many new facts of great importance in diagnosis and treatment. Readers of Dr. Fowler and Mr. Godlee's recent work will know what to expect in these contributions, which are characterised by thoroughness and accuracy. The contrast drawn between the lesions of pulmonary syphilis and pulmonary tuberculosis on pp. 328 and 329 is of great value and we venture to quote these instructive passages:—

"1. Tubercle usually affects the apex of the lung and subsequently the apex of the lower lobe; it tends to progress along a certain route. The primary lesion of syphilis is often about the root and central part of the lung; the disease

follows no definite line of march and gummata may be found in any position. 2. Both tubercles and gummata may undergo either necrosis and caseation or fibrous transformation; but with caseous tubercle the tendency is towards softening and cavity formation is the rule, whereas a caseous gumma very rarely breaks down. 3. The progressive destruction of the lung by a process of disintegration leading to a gradual increase in the size of a cavity, a change so commonly observed in tuberculous disease, is rarely if ever observed in syphilis except as a secondary result of stenosis of one of the main bronchi. 4. In nearly all cases of advanced destruction of the lung occurring in the subjects of syphilis stenosis either of the trachea or of one of the main bronchi is present, whereas this lesion is very rare indeed in tuberculosis. 5. The cavities found in cases of pulmonary syphilis are usually bronchiectatic, but not invariably so, whereas in tuberculosis they are commonly due to progressive destruction of the lung, but may be bronchiectatic. 6. The tendency to the formation of pulmonary aneurysms, which is so marked a feature in tuberculosis, is rarely observed in pulmonary syphilis. 7. Pulmonary lesions in tuberculosis are very common, whereas in syphilis they are extremely rare."

The close association between hay fever and asthma is well recognised in the article treating of these conditions contributed by Dr. Goodhart, who points out how scanty are the data derived from the study of the clinical and pathological history of asthma to explain its phenomena. He discusses the various views advanced as to its pathogeny in an impartial spirit and does not hesitate to point out the difficulties in the way of accepting any one of them as all sufficient. He inclines, however, to the generally accepted explanation of bronchial spasm, together with that of turgescence of the mucous membrane—a combination of the two most advocated doctrines, which probably brings us nearest to the truth, besides connecting the asthmatic paroxysm with the paroxysmal sneezing of hay fever. At any rate the place of these affections in the nosology is on all grounds rather with the neuroses than with affections of the respiratory system.

The section devoted to the Diseases of the Pleura is introduced by an article on Intra-pleural Tension by Dr. S. West. The subject is a difficult one, involving physical problems of some intricacy, and in spite of the attention which it has from time to time received there is still room for its complete investigation. The essay here contributed by Dr. West deserves careful study and propounds the problem in a clear and concise manner. Dr. Gee writes on the subject of Pleurisy, the section on Morbid Anatomy being furnished by Dr. Herringham. In respect to this disease it is interesting to observe how completely the doctrine of its dependence upon specific morbid poisons has come to be accepted, Dr. Gee admitting that even in cases where traumatism and exposure to cold are followed by pleurisy these agencies serve only to facilitate the invasion of specific microbes. It is needless to say that the subject is treated in a most attractive and masterly manner. Professor Finlay writes on Pneumothorax in a practical and instructive manner, his directions as to the indications for paracentesis being sound and judicious.

The conditions and diseases in which the blood is primarily concerned form the subjects of numerous articles under the heading of Diseases of the Circulatory System. They are preceded by an article, entitled "General Features of the Blood," contributed by Professor Michael Foster, and a fairly exhaustive account of the Clinical Examination of the Blood, by Dr. Monckton Copeman, as well as one on Cardiac Physics by Professor Sherrington. Space forbids our attempting to do more than name these valuable additions to a medical treatise, but their inclusion suffices to show how intimately the methods and results of physiology are bound up with the problems of disease. Professor Clifford Allbutt writes upon Chlorosis in a most interesting article which leaves nothing untouched and combines the rich fruits of his personal experiences with a wide knowledge and appreciation of the scientific labours of others, notably amongst recent writings those of Stockman and Lloyd Jones. Dr. Coupland gives a summary account of Pernicious Anæmia, from which it is apparent that by no means the last word has been said upon the pathology or treatment of this remarkable affection; and Dr. S. West writes on Splenic Anæmia, excluding from his consideration the comparatively large series of cases in children to which attention was, we think, first directed by von Jaksch. Nor does he sympathise with the teachings of Banti upon the propriety of early removal of the spleen as a curative measure. For the subject of Hæmophilia the editor has secured the services of Dr. Wickham Legg whose monograph still remains practically the sole English treatise on the subject. It is noteworthy that he speaks very cautiously on the alleged influence of chloride of calcium in arresting the hæmorrhagic tendency. Dr. John Thomson writes on Hæmorrhages in New-born Children, grouping the conditions under the two heads of (1) Traumatic or Accidental Hæmorrhages, and (2) Spontaneous Hæmorrhages, of which the most remarkable are those rare cases of idiopathic nature the etiology of which is much debated, but considered by some to be due to the intervention of micro-organisms. Dr. Stephen Mackenzie discusses the various conditions which have been styled "Purpura" and shows how complex these are, an instructive analysis of 200 cases at the London Hospital bearing this out, besides proving the relative rarity of the condition. Mr. Johnson Smith writes on Scurvy and Dr. Cheadle on Infantile Scurvy, citing his experience as to the much greater incidence of this affection amongst the children of the well-to-do than amongst the children of the poor. Dr. Monckton Copeman contributes an article upon Hæmoglobinuria which, as he says, is probably invariably due to the separation of hæmoglobin from the red corpuscles in the general circulation. He describes three forms, the infantile, the toxic, and the paroxysmal. With respect to the last named it would have been of interest to learn the ultimate fate of the subjects of it. No doubt in many instances the liability to attack lessens as age advances, but there must be cases where local or general diseases have supervened and the association between them and the blood state may possibly throw light upon the pathology of the latter. Dr. Robert Muir is the author of the article on Leucocythæmia, a subject to which he has himself contributed many important facts. His testimony to the value of arsenic "as the only drug which seems to have a distinct effect on the leucocythæmic condition" will be generally endorsed. A valuable pathological study of Dropsy from the pen of Dr. W. H. Dickinson completes the division of the work treating of the blood.

Next comes the section upon Heart Diseases. It opens with an article by Dr. Laurence Humphry upon Congenital Malformation of the Heart, treated in a thoroughly systematic manner which renders it well suited for reference. Dr. Frederick Roberts writes upon Diseases of the Pericardium. His article is most exhaustive, a fitting successor to the elaborate contribution on the same subject to Reynolds's System by the late Dr. Sibson whose painstaking observations are often referred to by Dr. Roberts. Professor Clifford Allbutt writes in his charming style upon Functional Disorders of the Heart, his article abounding in examples from his personal experiences, most happily chosen, whilst throughout the tone is one of hopefulness and good sense. He also writes upon Mechanical Strain of the Heart, a subject which we are glad to see receive such extended notice. A "sign of the times" is the inclusion here of an article upon Injuries by Electric Currents of High Pressure. It is written by Dr. Thomas Oliver, whose conclusion is that the cause of death in such cases is cardiac, probably, as explained by Bleile, from

arterial constriction giving rise to an amount of mechanical impediment which the heart cannot overcome. This is contrary to the view of D'Arsonval, who attributes the fatal event to asphyxia. To our thinking Dr. Oliver does not lay stress enough upon the fact that it is not voltage that kills so much as ampèrage—i.e., quantity of current. The voltage of even a small Leyden jar is probably very high—possibly 10,000 volts or so—but the quantity of current being infinitesimal the shock, though unpleasant, does not kill. Dr. Dreschfeld writes upon Endocarditis and Sir R. Douglas Powell upon Diseases of the Myocardium in articles which may well claim to be authoritative. The editor also contributes to the volume a very thorough study of Disease of the Aortic Area of the Heart and Dr. Sansom writes upon Diseases of the Mitral Valve. We trust that enough has been said here to show that the reader of this volume will greatly profit by its perusal. The articles are of high quality and their writers are well chosen, their very number ensuring a delightful variety in style and mode of thought which constitutes a pleasing feature of such treatises. We may also venture to congratulate the accomplished editor upon the near approach of the completion of his labours in the production of a work of abiding interest and value.

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*Can it be True? A Psychological Study.* By G. YEATES HUNTER, I.M.D. London: Digby Long and Co. 1898. Price 6*s*.

"THE principle of heredity is an immense and ever-increasing factor in the human life as the ages roll on." This, one of the closing sentences in Surgeon-Major G. Y. Hunter's tremendously sensational novel, gives the key to the whole work. The rapid growths of insanity and suicide at the present day prove to him that civilisation "with all its magnificent results in improved sanitation and enhanced public and personal hygiene" has not strengthened the modern mind in proportion to the modern body. While the body, he says, "has benefited from applied scientific knowledge and the value of life has increased from an actuarial point of view, the mind has become hypersensitive and therefore more susceptible to disease." Of course there is much in this thesis that is arguable, but they are the writer's opinions and his book is a document in support of them.

The story is not a pleasant one, but this is no reproach to it, for it was clearly not written to please. It tells of two sisters, one weak and a wife, the other wicked and a wanton. Alice, the wanton, covets the husband of her weak sister Mary and persuades her to elope with a major, who is described as the typical profligate and who more than any figure in the book impresses us as a conventional character and not a person of flesh and blood. The major drives his poor victim mad. She escapes from his thrall to confront her evil sister in a tender love-passage, or what is on the point of becoming such, with her deserted husband. From this point onwards the story is one of unmitigated gloom. The major is murdered and Mary shares the same fate, while their double murderer Alice dies in a lunatic asylum. It would not be fair to tell more of the plot than this, although the author relies upon his insight into the psychology of his lurid creations rather than upon his construction to arouse an interest. We recommend "Can it be true?" to our readers as a straightforward story of crime and punishment, well and often powerfully written by a man who knows what he is talking about. The seamy side of life has evidently few secrets from Surgeon-Major Hunter, while a situation has no terrors for him because of its horror or its inherent improbability. Here he is a good disciple, conscious or unconscious, of Balzac, and we confess that we approve his courage.

Surgeon-Major Hunter concludes his book by wishing that the State would think proper to appoint a Health Minister to guard not only the bodies but also the minds of the people, as he considers that "sound education, firm discipline, and unwearied care are called for in the mentally delicate. The first indications of passion have to be met in order that they may not run riot." If this is the moral of his book—and it wears the air of being so—he has to face the question how far State interference would have been able to avert the series of tragedies which he has depicted. For ourselves we do not see how the State could have stopped Mary from eloping or have decided that Alice was mad in time to stop her from committing murder.

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*Ringworm in the Light of Recent Research.* By MALCOLM MORRIS, F.R.C.S. Edin. London, Paris, and Melbourne: Cassell and Co. 1898. Quarto. Pp. 142. Price 7*s*. 6*d*.

THIS work is an expansion of a paper read at the International Congress of Dermatology in 1896. It aims at presenting a concise and critical review of the subject according to the recent observations of Sabouraud and those who have worked on the same lines, including the author himself. In this we think Mr. Morris has been successful and the book may claim to be the clearest and most concise account of the results of an enormous amount of careful and laborious work mainly accomplished by Sabouraud. Yet the outcome of it all is, in Mr. Morris's opinion, that while the main result is that the fungi which cause ringworm may be divided into small-spored and large-spored, the further division of the large-spored into numerous sub-species cannot be considered as proved and, in fact, that there is more evidence against it than for it.

The subject is discussed in twelve chapters—Introductory; the Parasitic Theory; four chapters on Etiology, discussing Sabouraud's doctrine and the researches of other workers, with a summary and comparison of results; Pathology; three chapters on the Clinical Varieties; Diagnosis and Prognosis; Treatment; and Prophylaxis. It can be thus seen that the whole subject is gone over and without repetition or undue verbiage is adequately set forth. In the chapter on Treatment the principal modes of treatment by others, as well as the author's own methods, are given. The work is illustrated with 22 beautifully executed micro-photographs by Mr. Andrew Pringle and a coloured frontispiece of the large- and small-spored fungus stained. It is altogether handsomely got up and is thus a credit to both the author and the publisher, and can be commended to all who wish to be familiar with the present aspect of the subject without wading through the details of the original papers.

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## LIBRARY TABLE.

*Lectures on Medicine to Nurses.* By HERBERT E. CUFF, M.D.Lond. London: J. & A. Churchill. Second edition. 1898. Price 3*s*. 6*d*.—At first sight this book might be thought to go too much into medical details, but on consulting the preface we find a satisfactory explanation of this. As Dr. Cuff says, an intelligent nurse will not be satisfied with knowing merely the mechanical details of her calling. She wants to know reasons, and if she is not taught by some duly constituted authority she will try to get them for herself out of medical text-books which she will not understand. Dr. Cuff has therefore aimed at supplying this want by setting out in simple non-technical language anatomy, physiology, pathology, and symptoms. All the lectures are clearly and admirably written and reasons for this or that procedure given in the simplest language. We can cordially recommend the book, not only for nurses, but for those students who are just commencing work as clerks in a medical ward.

*B. Bradshaw's Bathing Places.* London: Kegan Paul, Trench, Trübner, and Co. 1898. Price 2*s.* 6*d.*—The edition of this directory for the present year differs slightly from that of last year in the omission of certain of the less known springs. We think, however, that the Caucasian watering-places might have been left in, as, for instance, Piatigorsk. With regard to the glossary of technical terms at the end of the book we would point out to the editor that cyanosis is not a disease of the heart or any other organ any more than jaundice is a disease of the liver, as is the popular opinion.

*Aids to Examinations.* Part II. By T. REUELL ATKINSON, M.D. Dunelm. London: Baillière, Tindall, and Cox.—This little book, which, as the author candidly states in his preface, "cannot in any way take the place of the ordinary text-books," is purely an *aide mémoire*. It contains questions in anatomy, physiology, surgery, medicine, midwifery, gynæcology, and public health. The answers are clearly and fully given and the book will be found very useful as a "refresher" to the memory.

*District Nursing, on a Provident Basis.* By JAMIESON B. HURRY, M.D. Cantab. London: The Scientific Press, Limited. 1898. Price 2*s.*—This little volume has been written with the object of extending the system of district nursing and gives valuable suggestions for the formation of a district nursing association *ab initio*. The idea of the author is to make the association as far as possible self-supporting, or provident, in contra-distinction to one which would be dependent upon charity and we thoroughly concur with him that any organisation which raises the standard of comfort in the homes of the industrial classes and at the same time increases their self-reliance and their independence of charity is a step in the right direction. Figures are given by which it is shown that, as a general rule, in towns one district nurse is amply sufficient for 4000 persons and the annual cost of a trained nurse varies from £80 to £100. 2000 persons contributing 1*s.* per year, or 1*d.* per month, would therefore be a sufficient number to provide the necessary funds, and would place the association upon a financially sound basis. The number of visits paid by a district nurse is estimated at from 15 to 20 per day, or 5000 visits in the year. The calculation is made for a compact and thickly-populated district and here the contribution of 1*s.* per head would be amply sufficient. In rural districts, on the other hand, where the population is scattered and where it is estimated that the nurse would only be able to serve 2000 persons a larger annual subscription would be necessary. The figures given are deduced from practical experience in the working of nursing clubs and associations now in existence. There is much valuable information connected with the subject; also suggestions are given for rules and regulations such as have been found useful in establishing and in carrying on a nursing association.

*Pharmaceutical Formulas: a Book of Useful Recipes for the Drug Trade, collated chiefly from the "Chemist and Druggist," with Annotations.* By PETER MACEWAN, F.C.S. London: Published at the Offices of the *Chemist and Druggist*. 1898. Price 8*s.*—This is essentially a book which is calculated to save reference to a score of books before probably the desired information is found. The recipes and formulas are necessarily up to date since the materials are mostly collated from that brisk organ of the trade, the *Chemist and Druggist*. The universality of information afforded in the book will be gathered from the following outline of the sections. The first section relates to toilet preparations and specialities, the next to preparations for the hair, the next to dental preparations, while the succeeding sections are devoted to perfumes, beverages, household and domestic requisites, writing materials, varnishes, polishes, and stains, lozenges, miscellaneous preparations, and lastly galenical and medicinal preparations. A good index enables the reader at once to ascertain the information which he requires. The directions enjoined are eminently practical and evidently based upon experience. The chapter on Galenical and Medicinal Preparations may be referred to as an example. The book supplies a distinct want and is certain to give satisfactio to those by whom such a work is in constant requisition.

*The Extra Pharmacopœia.* Revised in accordance with the British Pharmacopœia, 1898. By WILLIAM MARTINDALE, F.L.S., F.C.S. Serotherapy, Organotherapy, Medical References, and a Therapeutic Index. By W. WYNN WESTCOTT, M.B. Lond. Ninth edition. London: H. K. Lewis. 1898. Price 10*s.* 6*d.*—The first edition of this indisputably handy compendium was published in 1883 and up to the time of the recent revision of the Pharmacopœia no less than eight editions had been published, which is a very practical proof of its usefulness and of the esteem in which it is very generally held. The ninth edition has just been issued—that is, within a very short time of the publication of the new Pharmacopœia with the revisions of and additions to which it is in complete accordance. The section of Organotherapy, by Dr. Wynn Westcott, is ably done and affords an excellent *précis* of the literature of the subject. The references are as complete and as recent as anything we have hitherto remarked. The authors merit warm praise for having undertaken what must have been no light task, and for the very excellent and expeditious way in which they have accomplished it. Though from its size the book is regarded as a pocket guide, yet it will be found to be replete with just that new information connected with the subject which every practitioner and pharmacist would do well to possess.

### *Guide-books.*

With the near approach of the holiday season comes the annual issue of guide-books, all setting forth the attractions of the districts they respectively deal with so enticingly that it becomes a matter of some difficulty for the tourist to make up his mind where to go. This important matter having been settled at the well-known family conclave, which invariably ends in one person getting his or her way to the discomfiture of the others, the necessary guide-book is applied to. It remains for us to mention some of the places easily and inexpensively reached. In the Tourist Guide to the Continent, price 6*d.*, published by the Great Eastern Railway Company, the traveller will find in the short space of 158 pages directions how to get to Belgium, Holland, North Germany, the Rhine, Denmark, Sweden, Norway, and Switzerland. The chapter of "dull, useful information" is good with one exception, and that is a remedy taken from the *Queen* for dust or grit in the eye. "One drop of glycerine allowed to fall into the eye generally affords instant relief." It might do so by causing a copious flow of tears, being a strong irritant to mucous surfaces, but the average patient will find one drop of castor oil just as efficacious and far less painful. Apart from this the guide-book is well done.

*The Swedish Touring Club's Guide to Sweden.* With 15 Maps. London: George Philip and Son. Pp. 215. Price 5*s.*—This little book will prove an excellent guide to those who intend to travel in Sweden. Its appearance is that of the familiar Baedeker and it is good and practical throughout. After chapters upon general information, hotels, sports, and means of getting about, the reader will find thirteen routes and tours described in a terse guide-book style. The Swedish Touring Club is becoming a numerous body. Its income is now about £2500 a year and the members have many privileges in the way of reduced fares and tariffs. It is worked somewhat in the

way of the English Cyclists' Touring Club, with a head office in Stockholm (Fredsgatan 28) and 400 consuls scattered all over the country. At the chief office information is given free of charge to all comers, be they Swedes or foreigners, on all subjects which relate to touring. The consuls do the same for their respective districts. The club opens new tourist routes and erects signposts and mountain shelters. Visitors to Sweden are encouraged to become members, the annual subscription being about 3*s.* 6*d.* The central parts of Sweden are largely covered by pine-forests and offer a splendid health resort for townspeople. At many places fine hotels have sprung up, where during the summer season first-class accommodation and food may be found in the heart of the wildest country. The districts around Lake Siljan in Dalecarlia, and around Ostersund on the line between Stockholm and Trondhjem, and the region of the two northern rivers Indalelfven and Angermanelfven, form three separate areas each excellent for a summer holiday.

The Danish Tourist Society send us an excellent little book about Copenhagen, published in London by Simpkin, Marshall, Hamilton, Kent and Co., and in Copenhagen by H. Hagerup, price 1*s.* 6*d.* This is an admirable publication for the information and plans, tables, &c., are so clear that even a stupid person could have no difficulty in finding his way about. We are tempted to quote the following as a very happy collocation of sentences. "In 1604 in the Helligaandshuset, "100 students in 8 days drank 18 casks of German beer in the place! Later on it was used as a mortuary."

## JOURNALS.

IN the *Phonographic Record* for July Sir W. R. Gowers, pointing out that chorea is sometimes mistaken for hemiplegia, says that there is scarcely an exception to the rule that when a child between the ages of seven and fifteen years is said to have lost the use of one arm the malady will turn out to be chorea. Dr. Fletcher Beach, in his paper on Mentally Deficient Children, confirms the aphorism of the late Dr. Langdon Down that the prospect of educating and training these children is "inversely as the child is comely, fair to look upon, and winsome." Dr. Beach describes in detail the characteristics of mentally deficient children in a manner both authoritative and instructive. It is to be hoped that Mr. Lamming Burton's picture of the dark side of an assistant's life is either overdrawn or exceptional.

LITERARY INTELLIGENCE.—The Rebman Publishing Company's new books include a work on the "Ferment Treatment of Cancer and Tuberculosis," by Horace Manders, F.R.C.S. Eng., and the following volumes in the series of "Lehmann Medicinische Handatlanten" (Hand Atlases), English edition, which they are publishing in conjunction with Mr. W. B. Saunders of Philadelphia: "Atlas of Internal Medicine and Clinical Diagnosis," by Dr. C. Jakob of Erlangen; edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic, Attending Physician to the Philadelphia Hospital; 68 coloured plates and 64 illustrations in the text. "Atlas of Legal Medicine," by Dr. E. R. von Hofmann of Vienna; edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases, Women's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York; with 120 coloured figures on 56 plates and 193 beautiful half-tone illustrations. "Atlas of Laryngology," by Dr. L. Grünwald of Munich; edited by Chas. P. Grayson, M.D., lecturer on Laryngology and Rhinology in the University of Pennsylvania, &c.; with 107 coloured figures on 44 plates and 25 black-and-white illustrations. The Rebman Publishing Company have removed to new premises at 129, Shaftesbury-avenue, Cambridge-circus, W.C.

# Analytical Records
FROM
# THE LANCET LABORATORY.

### TABLOIDS OF (1) BISMUTH SUBGALLATE; AND (2) HYPOPHOSPHITES COMPOUND.
(BURROUGHS, WELLCOME AND CO., SNOW-HILL BUILDINGS, E.C.)

BISMUTH subgallate is a salt of interesting composition which has been comparatively recently introduced in medicine. It acts as a useful check on the progress of fermentative dyspepsia and good results are recorded of the regular administration of the tabloid of 5 gr. in such cases before or after each meal. It has been employed also in typhoid fever, gastric catarrh, and in cholera asiatica, and in various forms of diarrhœa. The salt occurs as a yellowish powder, a condition which appears after the tabloid has been placed for a few minutes in water. The tabloid readily crumbles in this way so that the convenience as well as reliability of the therapeutic effect of the salt in this form is established. The composition of the tabloid of hypophosphites compound is based upon the well-known formula comprising the hypophosphites of calcium, potassium manganese, iron, quinine, and strychnine. Each tabloid weighing 1½ gr. is equivalent to half a teaspoonful of standard compound syrup, many of the drawbacks of which are surmounted by this convenient form of administration.

### "ULRICUS" AND "BELVEDRA" MINERAL WATERS.
("PASSUGG," 39, EASTCHEAP, E.C.)

These waters, which are drawn close by the gorge of the Rabiusa, near Coire, Switzerland, present some noteworthy features on analysis. "Ulricus," for example, is a highly alkaline water containing an important quantity of iron in the form of protocarbonate. A distinct amount of bromine is also present. The results of our analysis were as follow: total saline constituents 6·00 grammes per litre; alkalinity reckoned as carbonate of soda, 4·92 grammes per litre; carbonate of iron, 0·069 gramme per litre; common salt 0·84 gramme per litre. The sample examined was bright and clear and under slight pressure of carbonic acid gas. The quantity of alkaline carbonate is somewhat remarkable. The water is therefore distinctly antacid and probably of value as a sedative in certain abnormal gastric conditions. A trace of lithium was also recognised. "Belvedra" is described as a chalybeate spring water, though according to our analysis the iron in it is less than in "Ulricus." It contains, however, much less mineral matter, as the following analysis will show: alkalinity reckoned as carbonate of soda, 1·80 grammes per litre; protocarbonate of iron, 0·0348 gramme per litre; and common salt, 0·029 gramme per litre. This water, like the last, contained a slight excess of carbonic acid gas. Though containing an important quantity of iron it was clear and bright. It may be used after the manner of an ordinary table water with the difference and probable advantage in some cases that it contains iron in a well-known assimilable form.

### TEMPERANCE BEERS.
(THE BANKS BEER CO., LTD., THE BREWERY, BLENHEIM-ROAD, HORNSEY-ROAD, LONDON, N.)

We have examined three or four types of the non-excisable beverages of this company with the following results. Pale ale: extractives, 1·28 per cent.; mineral matter, 0·10 per cent.; alcohol, by weight 0·53 per cent., by volume 0·66 per cent., equal to proof spirit 1·16 per cent. This ale possesses a delicate bitter flavour and is slightly charged with carbonic acid gas. Mild ale: extractives, 1·66 per cent.; mineral matter, 0·10 per cent.; alcohol, by weight 0·53 per cent., by volume 0·66 per cent.,

equal to proof spirit 1·16 per cent. This specimen possessed slightly more "body" than the previous one, having a decided malty flavour, together with that characteristic of the bitter principle of the hop. Stout: extractives, 2·28 per cent.; mineral matter, 0·11 per cent.; alcohol, by weight 0·53 per cent., by volume 0·66 per cent., equal to proof spirit 1·16 per cent. As might be expected the stout contains more extractives than either of the previous samples. Its flavour distinctly suggests ordinary brewed black beer. As will be seen the quantity of alcohol is negligible and nearly a half below the excise limit. The beers were in perfectly sound condition and evidently prepared from malt and hops and not substitutes. We could find no objectionable preservative. In regard to the ginger-beer we did not find it satisfactory. On removing the stopper most of the liquid was lost through violent effervescence and what liquid was recovered was not of a particularly agreeable character. Perhaps the ginger-beer was too young or had been exposed to a too high temperature.

### TURTLE JELLY.

(T. K. BELLIS, 6, JEFFREYS-SQUARE, ST. MARY AXE, E.C.)

Turtle jelly is an excellent preparation for patients who requiring a nourishing article, find it inconvenient to take it in the form of warm soup. The jelly is practically clear and possesses that peculiarly agreeable flavour for which turtle soup is highly esteemed. Obviously if desired the jelly may be soon converted into soup by merely warming. In the form of jelly, however, and of course cold, it will often be more acceptable. The jelly is contained in glass jars sealed with a cork cap protected by a capsule.

### (1) IODOFORMOGEN; AND (2) TANNALBIN TABLETS.

(B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

The idea of combining iodoform with albumin, giving rise to a compound which has been called iodoformogen, is ingenious and one presenting certain distinct advantages. Thus iodoformogen has little or no smell, is non-hygroscopic, and occurs in the condition of a fine powder, which it is said does not "lump." In short, iodoformogen would appear to be much superior for the purposes of dressing wounds to iodoform itself, as while exhibiting the antiseptic properties of iodoform it permits of more uniform dusting, the grains clinging more intimately to damp surfaces than is the case with iodoform. Tannalbin is now well recognised as a useful but non-toxic intestinal astringent. It is particularly servicable for checking diarrhœa. This is to be attributed to the fact that while it is insoluble in the gastric juice, producing no disturbance in the stomach, yet it dissolves slowly in the intestinal fluids producing an astringent effect. The compound is prepared from albuminate of tannin by exposure of the substance to a temperature of 110° or 120° C. for five or six hours. The tablets contain five grains of the compound and they afford a very convenient means of administering it.

### HARZBACH MINERAL WATER.

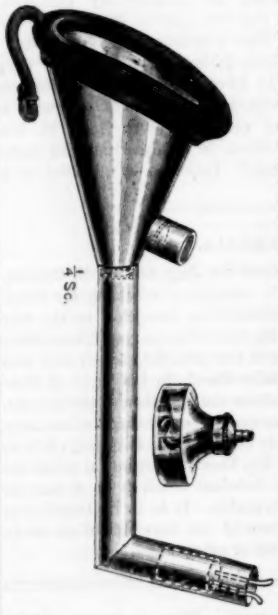
(BROWN BROTHERS AND CO., 35 AND 37, WASHINGTON-STREET, GLASGOW.)

According to our analysis Harzbach water is a mildly alkaline carbonated water suitable for table purposes. The alkalinity of the water reckoned as carbonate of soda was found to be equivalent to 0·84 gramme per litre; the salt amounted to 1·98 gramme per litre. It contains also minor constituents — as, for example, carbonate of magnesia, sulphate of lime, and traces of lithium salts. Amongst the specimens we examined some were not satisfactory, one having parted with the excess of carbonic acid gas and another being of a distinctly yellowish colour. Further, on heating the solid residue a very distinct blackening occurred due to organic matter. The method of stoppering the bottles is novel. It consists of sealing the bottle with a thin layer of cork bound down by metal capsule, so bound under the lip of the bottle as to be firmly attached even though there is considerable pressure within. It is probable, however, that this method of stoppering accounts for some of the unsatisfactory results which we have recorded.

## New Inventions.

### AN ORI-NASAL INHALATION TUBE.

THIS instrument is for the purpose of inhaling the vapour of drugs such as menthol, oil of eucalyptus, pinol, and many other substances, in a far greater degree of efficiency than has been hitherto possible with other forms of instruments. It consists of a long tube, at one end of which is a mask with metal valves. The mask fits over the mouth and nose. At the other end is a small moveable tube made to open at either extremity and covered at these points by caps of coarse wire gauze, and this tube is to contain the drug to be employed. All parts of the instrument are made of plated metal. The mask is fitted with a comfortable rubber covering. This instrument will prove of much value in cases of throat and lung affections, nasal catarrh, coryza, or cold in the head, and other similar complaints. The chief advantage with this instrument is that heat may be employed by means of the flame of a spirit-lamp in the vicinity of the drug tube, towards the extremity of the apparatus. By this means an immense amount of vapour is given off from the drug which has been employed, and the patient inhaling this concentrated vapour naturally derives a far greater degree of benefit. The ori-nasal inhalation tube being made of metal is not liable to injury like instruments made of glass or china, &c. Another point is that being made of metal it can be readily cleansed with hot water, thus thoroughly purifying it. The instrument is manufactured by Messrs. S. Maw, Son, and Thompson, 7 to 12, Aldersgate-street, London, E.C.




Somerley, Reading. H. HIBBERD BEALE.

UNITED HOSPITALS ATHLETIC SPORTS. — The annual athletic competitions among the London hospitals were held at the London Athletic Club Ground, Stamford Bridge, before a small but enthusiastic gathering of spectators on Saturday, July 9th. The programme consisted of 12 events, 11 of which constituted the contest for the Hospitals Challenge Shield. St. Mary's was again, for the third year in succession, successful with 5 firsts, Guy's and St. Bartholomew's having 2 each. The performances of F. W. Sime (Guy's), A. G. Butler (St. Mary's, who beat the hospitals ½-mile record held by himself), C. E. H. Leggatt (whose high jump of 5 ft. 9 in. also beat the record held by himself), and R. C. Leaning (St. Mary's), were excellent; while in the invitation race of 1½ miles the four miles champion, C. Bennett, only just failed to beat the present record.

# THE LANCET.

*LONDON: SATURDAY, JULY 16, 1898.*


IT is impossible to doubt that the action of the General Medical Council in the matter of imposing further restrictions on the employment of unqualified assistants by registered practitioners has met with the general approval of the profession. We have given free admission to correspondence on both sides of this question. We have not been insensible to the hard bearing of the Council's new Regulation or Notice on a certain limited number of men who, having passed through a regular curriculum of study, have, from no fault of their own, been unable to qualify. We have even admitted that the Council's slow and halting action in the past in discouragement of the employment of unqualified assistants has given the profession an impression that, under certain conditions of supervision, such employment would not be condemned. But nevertheless, looking at the accumulating evidence of the misuse and abuse of this license, at the growth of a strong public sentiment against it, at the extensive deception practised on the public by it, and at the manifest injustice of it to registered members of the profession, especially to the younger members, it is clear that the time had come for the Council to advance in the matter and to increase the stringency of its regulations. It is equally clear that the weight of public and professional opinion is in favour of what the Council has done. There have been, of course, a few protests and complaints. In the ranks of the unqualified there are men who have been found very handy, very honest, and very serviceable. Years of experience in a general practice do give a certain education and aptitude. Besides, such men have fulfilled duties of management and of book-keeping and dispensing, necessary duties, the delegation of which greatly relieves the busy practitioner whose clinical duties absorb a large portion of his time by day and by night. It is possible that without any violation of the Council's regulations a few of the best class of the unqualified, whose age makes any other calling impracticable, may still be retained for the performance of such duties. It may be admitted that there is something in the complaint of practitioners in some parts of the country that they have a difficulty in getting qualified assistants. The committee of the General Medical Council seemed satisfied with the evidence on this point. But we can scarcely believe that this difficulty will be of long duration. The average annual excess of supply of new practitioners over the annual loss in the way of death is for the last five years 882. Even last year, when the number of new registrations was less than it had been for nine years, there was an excess of supply over loss by death of 648. In the face of such figures we may conclude that the difficulties alleged to exist at present are due to temporary causes and chiefly to some misunderstanding between the parties affected by the new regulations—principals on the one hand and qualified assistants on the other. We claim to have given our correspondents on both sides of this question a fair hearing, and we must admit that both sides have shown considerable skill in stating the facts and the conclusions as they present themselves from their respective standpoints.

The time has come for facing what is practically a new departure. Principals and assistants will now do well to see how they can best meet each other's objections and accommodate themselves to actual facts. Some of our correspondents have described vividly the hardships of the life of a qualified assistant—his modest salary, his humble fare, and his hard work. One of them described his work as "slavery, night and day," and said that, as a rule, he had found principals "very selfish." This assertion is refuted by "Practitioner" in THE LANCET of July 9th in a very forcible letter, and we believe that most of those who have had experience of assistantships will say that principals are very like men in other arduous and unremunerative professions who have enough to do to "make ends meet" and to distribute with fairness their modest income between the claims of their family with a necessary establishment on the one hand and their assistant on the other. Not a few such in the after periods of life will look back to their assistantship as one of their most useful experiences, and will recall their principals with every sentiment of respect and friendship.

A young man, emerging from a period of prolonged study and costly education, having succeeded in getting on the Medical Register naturally thinks that his time for remuneration and reward has come. He has been familiar for years with men, his teachers, at the head of their profession, who keep large establishments and expensive carriages and evidently enjoy considerable incomes. He is apt unthinkingly to apply such standards of comfort and dignity to members of the profession generally. Unlike his seniors in practice he has had little experience of private practice and its standards of remuneration, and if in his first assistantship he chances to be located in a small town or a poor rural district he will probably experience a considerable disillusionment. If he is a man of sympathy and imagination he will put himself into his principal's place and make allowance for his difficulties. If he is not endowed with these qualities he will be dissatisfied with his environment and will vent his censure on the unfortunate principal who may be very little to blame. For he is only one of 30,000 men of the profession. He is responsible, of course, for his own character and for the treatment of his assistants, but for the general state of the profession, for the competition in it, for the loosely administered charities which spoil it, and for the low conceptions in the public mind as to the remuneration of medical men his responsibility may be of the very slightest. This last is the real evil which has to be grappled with and for the cure of which principals and qualified assistants must strive together. The employment of the unqualified assistant did give some excuse to those who made light of medical claims; but the Regulation of the General Medical Council will be a stimulus and unanswerable argument for medical practitioners to demand higher rates of remuneration with

which they may adequately pay those assistants who bring full qualifications to their work and whose education has extended over years.

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THE social and sanitary problems of Liverpool do not differ essentially from those met with in certain other large towns, but the scale on which they may be studied and the graphic way in which they have been set forth in the annual reports of the successive medical officers of health have served to invest them with peculiar interest. Accordingly we have frequently devoted a leading article to the subject or to its principal features with a view to excite interest and to give encouragement to those whose arduous duty it is to make life longer, healthier, and pleasanter in a community which for many years enjoyed among English towns a pre-eminence in overcrowding and all the variety of evils which that condition involves. We have lately shown the difficulty of arriving at quite accurate data as to the population of the city in the long intercensal periods, and allowance for error under this head must always be made; but, even so, the broad figures and facts of the last report include subjects which are worthy the attention of all medical men and of all who realise the part played by municipal government in the application of medical and hygienic science to the wants of large populations. We chance to have on our table two reports of the health of Liverpool—one for 1869 and the other for 1897. The most pessimistic student of modern civilisation must admit the great strides which have been made in improving the health of the most crowded communities and in bringing large classes of deadly disease under comparative control.

Let us take, for example, the case of tuberculous diseases. We are fain to think that if mortality from this class of diseases can be materially reduced in such a community as Liverpool we need not despair of bringing any kind of disease into subjection. This has actually been achieved in Liverpool. The annual average death-rate per 100,000 of the population at all ages from all forms of tuberculosis is given for three decennial periods, as well as for that of 1896–97. The decline is steady. But for greater clearness we will give the comparison of the rate of the decade 1866–75 with that for the last year. For the former period it was 430·8 per 100,000; for the last year it was 258·2. It will be remembered that this improvement has come mainly from broad improvements in sanitation. We are on the eve, it is to be hoped, of seeing many special measures for dealing successfully with this great evil, founded on discoveries, bacteriological and otherwise, which were not made in the decade to which the first statistics apply. It is gratifying to find that the health authorities of Liverpool are availing themselves of the assistance of bacteriological experts in dealing further with this tuberculous problem. In the meantime it is satisfactory to know that, by the ordinary action of their by-laws, by improvements in property, and by the wholesale destruction of large insanitary areas, such great and significant improvements have already been wrought.

We may at this point say a word in strong praise of the sanitary authorities of Liverpool for one other act of enlightened municipal wisdom on their part. Dr. HOPE, the medical officer of health, on page 183 of his report for 1897 says: "The Committee have provided at each one of the city hospitals [isolation] a supply of antitoxin which is given to any medical practitioner making application for it." We know that in other large communities, probably in most, no such provision exists and that public authorities, which are keen to expend many thousands of pounds on large buildings and in other ways, make no provision for supplying promptly and purely an article on the easy and early procuring of which by medical men the saving of life in cases of diphtheria often depends. A comparison of the two reports for 1869 and 1897 shows a great improvement in diagnosis. In the 1869 report, as Dr. HOPE points out, all continued fevers were included under the generic term of typhus—i.e., so-called gastric fever, enteric fever, low fever, continued fever, brain fever, bilious fever, relapsing fever, and typhus fever. Such a method, of course, vitiated the statistics and all conclusions from them. The present report shows a great advance and gives sharp and precise returns of the different forms of continued fever. There survives, however, in the report for 1897 a distinction in diagnosis of very dubious propriety. On page 38 the number of deaths from diphtheria is given as 91; on the next page the deaths from croup and membranous croup are given. We will not say that there are no such diseases as croup and membranous croup distinct from the disease produced by Löffler's bacillus, but we venture to suggest that a closer examination of such cases will very greatly reduce the distinction and identify the cases as diphtheritic ones. The zymotic mortality of Liverpool is still, of course, very large, in spite of the reduction in the number of people living in cellars, the notification system, the creation of isolation hospitals—which are increasingly popular and absorb 54·6 per cent. of the cases of scarlet fever—and other sanitary measures. Typhus fever can still be studied in Liverpool. There were last year 158 cases, of which 23 resulted fatally. There is a gradual decline of typhoid fever, but it still reigns, and the report includes a very well-tracked instance of a small outbreak among 27 children who had, all but two, eaten ice-cream sold at a fair. The two had eaten chip potatoes procured from the same vendor in whose house a case of typhoid fever was found. Infantile diarrhœa still asserts itself with great force and kills nearly as many as all the other epidemics put together. Still, the impression made by the report is that new forces of health and hygiene are gradually gaining the ascendancy. There was not one death from small-pox, but Dr. HOPE does not disguise his apprehensions at the discouraging aspect of vaccination legislation. He admits the value of isolation measures, but like all medical men knows how inadequate this measure will prove in the absence of systematic, conscientious and repeated vaccination.

We must not close this notice of the social and sanitary problems of Liverpool without allusion to one great factor in its sickness and mortality—that of intemperance—the more so as Dr. HOPE devotes, with no exaggerated estimate, two pages to the subject. He does not hide his sense of its gravity as an influence comparable to that of zymotic disease. As a *direct* cause of death it shows a

slightly higher figure than in the preceding year and has been more fatal than scarlet fever or all the other forms of fever combined. And in its remote and indirect mischief he thinks drink even farther reaching and much more insidious than zymotic sickness, and this in spite of an exceptional decrease in the arrests for drunkenness. The latter are no guide as to the degree in which alcohol is used so as to be pathogenic, which Dr. HOPE evidently considers to be still very serious. "There was no evidence," he says, "that excessive drunkenness in the homes of dwellers in the more squalid regions has materially diminished." It is awkward when there is such a discrepancy between the medical and the police reports of this vice; but it is certain that the medical is the more reliable and will have to be reckoned with before the health of Liverpoo or any such community can be placed on a satisfactory footing.

THE House of Commons Committee having concluded its labours on the Vaccination Bill we may glance at the principal results achieved. In Clause 1 the infantile vaccination age limit has been fixed at six months as in Scotland and a provision has been added that no regulation of any hospital or institution shall override this enactment by fixing an earlier age. The public vaccinator's domiciliary visit is to be made at four months instead of nine months, as proposed when the age limit was intended to be one year. An important alteration has been made with regard to the description of the lymph to be used. In a former article we pointed out that the phrase "glycerinated calf-lymph" was insufficient to prevent any mixture of glycerine and calf-lymph, however carelessly made, being used under the Bill. The clause now runs that the public vaccinator "shall offer to vaccinate the child with glycerinated calf-lymph or such other lymph as may be issued by the Local Government Board." This really amounts to a guarantee that all lymph so used shall have been prepared with the greatest care and in the light of the most recent knowledge. Where the public vaccinator finds a house so unhealthy as to be dangerous to an intended vaccinee he shall postpone the vaccination and send notice to the medical officer of health. Clause 3, the obscurity of which caused much debate, has been altered and simplified as follows: "The Local Government Board may make rules and regulations with respect to the duties and remuneration of public vaccinators, whether under contracts made before or after the passing of this Act." A new clause provides that when small-pox threatens, or in other exceptional circumstances, the Local Government Board may issue an order requiring any board of guardians to make temporary provision of vaccination stations. In any future imprisonments under the Acts the prisoners are to be treated as first-class misdemeanants.

A fortnight ago, in commenting on the defeat of Sir WALTER FOSTER'S amendment providing for a declaration of conscientious objection, we indicated that there was a danger that this defeat might prevent perseverance with amendments for the inclusion of revaccination in the scope of the Bill. At the same time we urged that these amendments should still be pressed, even subject to a conscience clause as regards revaccination, and we suggested that though the scheme would be illogical there would he no special difficulty in applying such a clause to revaccination even if no alternative to penalties were to be allowed as regards infantile vaccination. As a matter of fact during the final sitting of the Committee a conscience clause was passed, but, curiously enough, it applies neither to vaccination of infants nor to revaccination of children before leaving school. At four years of age children who have not been vaccinated in infancy, and whose parents have been penalised under Section 29 of the existing Act, may again be dealt with, this time under Section 31, and a penalty again enforced. But relief from this second penalty may be obtained by the parent satisfying the court that he entertains serious objection to vaccination. This amendment was carried against the Government by a combination of supporters of vaccination, such as Sir WILLIAM PRIESTLEY (who proposed it), Sir CHARLES CAMERON, Sir CHARLES DALRYMPLE, Mr. MONK, &c., with the pronounced anti-vaccinationists on the Committee. On the whole, the amendment has our sympathy, though Mr. T. W. RUSSELL pointed out that, owing to changes of abode and to the want of any provision for obtaining information regarding unvaccinated children of four years old, its application will be very much limited. Whether the Government will accept it on the report stage in the Commons remains to be seen. Its adoption by the Committee serves at any rate to justify our contention that the loss of the conscience clause as concerns infantile vaccination formed no insuperable obstacle to the adoption of revaccination, with a proviso for the relief of "honest" anti-vaccinationists. That being so, we are bound to express our opinion that a blunder was committed by medical members of the Committee in not moving the revaccination amendments which had been put on the notice paper and which could easily have been further altered by incorporation of a provision allowing for conscientious objection. Of course, no such amendment could have been carried against the Government, as there would have been in its support no combination like that which defeated Mr. CHAPLIN in his opposition to Sir WILLIAM PRIESTLEY'S clause. But the amendment would at least have forced Mr. CHAPLIN'S hand and would have crystallised before the Committee the opinion of the medical profession as to the clamant requirement of the time for the prevention and control of small-pox epidemics. Even yet, in the Commons or in the Lords, it is most desirable that this question should be definitely brought forward, so that, whatever be the fate of the Bill, and whatever be the decision of the legislature, the responsibility with regard to a provision for national revaccination shall be laid on the shoulders which ought to bear it.

In his oppostion to the clause providing for the payment of private practitioners for properly performed vaccinations Mr. CHAPLIN had the support of what we may call the anti-vaccinationist section of the committee, and here also he was successful. The rejection of this clause, the non-adoption of revaccination and the bungling as to conscientious objection are the outstanding features of the

Committee's work on the Bill. They leave it a mere makeshift which will do no credit to the Government and which will not be effective either in drawing the teeth of the anti-vaccinal agitation or in increasing the national protection against small-pox. It is a very poor outcome of the seven years' labours of Lord HERSCHELL'S Royal Commission.

# Annotations.

"Ne quid nimis."

## THE TEACHING OF TROPICAL DISEASES IN LONDON

THE letter of Sir Henry Burdett and the leading article based thereon in the *Times* of July 11th will bring to a focus the question of the formation of a school for studying and teaching tropical diseases in London. At the suggestion of Mr. Chamberlain the committee of the Seamen's Hospital has placed before him a scheme which practically amounts to an enlargement of the branch hospital at the Albert Docks from 20 to 45 beds, and the building of school premises, museum, and laboratory, with accommodation for from 20 to 25 students, of whom 10 would be able to sleep on the establishment. A medical tutor is to supervise the instruction for six hours daily, whilst the staff of the Seamen's Hospital as well as of the branch hospital, with specially selected additional teachers, are to attend and teach for four hours a day during four days a week. We see no provision in Sir Henry Burdett's letter for the payment of this staff of teachers. It can scarcely be expected that the physicians and surgeons attached to the Seamen's Hospital Society can undertake any more gratuitous work than they have at present. The Albert Docks is not a very accessible place and a visit there, with four hours' teaching, will make a serious inroad into a physician's or surgeon's daily work. The study of tropical diseases is of the utmost practical importance for colonial and military surgeons and practitioners and deserves every encouragement. Hitherto it has been best carried out at Netley and the amount of practical material in that hospital for such a study must not be ignored, although it is only at the disposal of the Indian and army medical officers. Sporadic courses of lectures in London are eminently unpractical because the students cannot watch the course and treatment of the cases illustrating the lectures. Few patients can be brought from Greenwich or the Albert Docks to a metropolitan school and few students will regularly visit either of these institutions. Sir Henry Burdett is sanguine that tropical diseases can be thoroughly studied at the docks and on behalf of the Seamen's Hospital appeals to the public for £10,000 and a net income of £2000 a year, in addition to a capital grant of £3550 from the Colonial Office and the fees from colonial students, estimated at £1000 per annum. We see no statement as to the number of tropical cases which are admitted into the hospitals of the Seamen's Hospital Society. Chronic dysentery, beri-beri, and chronic malaria make up almost entirely the tropical diseases which a student may expect to see during a course of three or four months' study, and acute cases must be extremely rare, judging from the annual reports of the society. Mr. W. Johnson Smith has published the records of the cases of hepatic abscess during twenty-five years and they only amount to fifty. Bacteriological investigation in tropical diseases can be taught in the well-appointed laboratories of many of our medical schools and is a part of the Netley curriculum. Phthisis, cardiac disease, rheumatism, and renal disease figure amongst the most common cases of illness at the Seamen's as well as at other hospitals. If compulsion is exercised on applicants for Colonial medical appointments, as seems to be implied in Mr. Chamberlain's letter, of course a regular supply of students will be at once forthcoming; but if there is no compulsion we question whether many will attend at such an inaccessible situation as the Albert Docks, and we doubt whether the variety of cases is sufficient to interest and instruct them for such a long period as three or four months.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE recent election of members of the Council of the Royal College of Surgeons of England, the result of which we published last week, was somewhat remarkable. Practically there was only one vacancy, as two of the former members, Mr. Langton and Mr. Morris, re-applied; and evidently many electors considered that this vacancy should be filled with a representative from the provinces. Mr. Richardson Cross, who headed the poll, received 411 votes, and of these 74 were plumpers. We believe this large number of plumpers is unprecedented, but it is still more curious that if he had not had even one of these plumpers he would still have been 12 votes ahead of the candidate who polled the next highest number of votes. The votes recorded for the two late members of Council who re-applied were nearly equal, Mr. Morris polling 325 and Mr. Langton 322 votes. We congratulate Mr. Cross on his election and we feel sure that he will prove a valuable addition to the Council. 651 voting papers were received by post—a larger number than on any previous occasion; but against this must be put the very small number of personal voters; in all there were only 26 and the number would be even smaller if it were not that several Fellows have been so long accustomed to vote personally that they do not like to give it up. On some recent occasions it has been found difficult to get the 6 Fellows present (exclusive of the members of Council) who are necessary for the commencement of the election under the Charter. The meeting of Fellows summoned by the Council for 5 o'clock on the same afternoon proved a failure. Only 26 Fellows were present and of these 8 were members of Council, but the quorum required by the by-laws of the College is 30 and therefore no meeting was held. A similar occurrence took place last January and in consequence the Council decided to call only one meeting of Fellows each year, and it was thought that the election of members of the Council would bring Fellows to the College, therefore the Fellows' meeting was summoned on the same day. Even on some occasions when a quorum was obtained there were no agenda beyond the confirming of the minutes of the previous meeting. All these signs point to an early abandonment of the meetings of Fellows unless the Fellows bestir themselves and put on the agenda paper resolutions for discussion which will attract at least sufficient Fellows to form a quorum. When we look back on the long and difficult struggle to get the Council to call meetings of the Fellows apart from the Members we cannot help thinking it would be a very great pity if these meetings should cease to be.

## THE FIGHT AGAINST TUBERCULOSIS.

THE necessity for making some defensive efforts against tuberculosis is now fully recognised and we are glad to see that the question is being widely discussed. At the annual meeting of the North of England Branch of the British Medical Association, held on July 11th at Sunderland, the President, Dr. William Robinson, delivered an eloquent address on the Repression of Consumption and the Need for the Erection of Open-air Sanatoria in England. After giving an account of the way in which phthisis is spread and

referring to the ravages which this disease commits Dr. Robinson pointed out the absolute necessity of strict hygiene being observed in workshops and the like as well as of careful and systematic inspection of meat and milk. Passing on to the question of sanatoria he said:—

"We have no drug which will kill the bacillus when lodged in the tissues, though so easily disposed of in the spittoon. All our remedies only help the host to fight the invader. Yet consumption is curable, for we can all look back on many cases in which the disease has become quiescent. The records of the post-mortem room also teach us how large a proportion of those dying of other diseases or of injuries show evidence of healed tuberculous lesions in the lungs. Fresh air and sunlight alone mean death to the bacilli and life to the patient. It is nearly 40 years since Brehmer established at Gobersdorf, in Silesia, the first sanatorium for the open-air method of treatment of consumptives and the results obtained there have been excellent."

There is one point to which Dr. Robinson did not draw attention and that is the enormous benefit which would accrue were the Smoke Prevention Acts rigorously carried out, not only in London, but in every large town. For months past the air of London has been fouled by filthy smoke arising from the chimneys of hotels, restaurants, and factories, and all this on the plea that smokeless coal cannot be obtained. The County Council have done their best, but some magistrates will not convict and others who do fine the offenders in such small sums that it is cheaper for them to poison themselves and their neighbours than to take the steps which would rectify the evil. Another matter which should be insisted upon is that no new houses should be built which are not fitted with appliances for smoke consumption. If smoke were prevented the hours of sunlight which town-dwellers enjoy might be doubled, and sunlight is a deadly foe to the tubercle bacillus.

## A PHYSICAL BASIS IN THE DRUNKENNESS OF WOMEN.

THE inquiry into the liquor laws has been varied and enlivened by the evidence of Mr. Lawson Tait, who may generally be relied on to strike out a line of his own. He is very kind in his estimate of female drunkenness which he entirely differentiates from that of the coarser sex. He does not admit that it is increasing. On the contrary, it is diminishing. With a remarkable confidence he comes to conclusions different from those of other observers and finds in the lowest class of women infinitely less drunkenness now than there was thirty years ago. But Mr. Tait's chief point is that it has a physical basis in the constitution and the sufferings of women, mental or physical. The average age of the majority of the patients whom he has seen was forty-eight years, and so he has no hesitation in associating it with the change of life. In the minority, whose average age was twenty-six years, there was definite physical suffering. Mr. Tait is doubtless right in recognising a certain connexion between the multitudinous pains and ailments of women and the use of stimulants. But few medical men, we apprehend, and fewer gynæcologists, would venture to recommend alcohol for such sufferings as he does. Mr. Tait rather suggests the objection to his own prescription when he shows that in so many women it leads to excess and to almost incurable degradation. Certainly most medical men will agree that a woman is in considerable risk who uses alcohol as a remedy for her periodical troubles. Such treatment is little better than the use of laudanum and little less likely to end disastrously. Equally doubtful in our opinion is Mr. Tait's defence of the grocers' licence. He says that drinking among women is nearly always secret. A very rough observation of what goes on in the street seems to show that an increasing number of women use the public-house. Older men than Mr. Tait think this an enormous change for the worse as compared with what they saw in their earlier days. But undoubtedly there is a stage in female drunkenness when it is secret and furtive. And this form of drunkenness is immensely favoured by grocers' and confectioners' licences.

## MEDICAL GRADUATES' COLLEGE AND HOSPITAL.

ON Thursday next, July 21st, at 5 P.M., there will be held a meeting of the medical profession in the building purchased for this College, 22, Chenies-street, Gower-street, W.C. Sir William Broadbent, Bart., will preside and full information will be given as to the objects of the institution. The premises can be inspected at any time and the attendance of all medical men at the meeting is invited. Full information can be obtained from Dr. Fletcher Little, 32, Harley-street, Cavendish-square, W.

## LEAD AS AN ABORTIFACIENT.

AT King's Norton on July 9th an inquest was held by Mr. E. Docker, coroner for North Worcestershire, on the body of a married woman, aged twenty-three years, whose death resulted from acute lead-poisoning. It was shown at the inquest that the deceased, whose health was described as having previously always been excellent, had been taking diachylon made into pills for the avowed purpose of bringing on a miscarriage. Some days before the fatal issue she had complained of the "use" leaving one of her hands. Subsequently she was seized with violent cramps and pains, writhing in agony, with blood running from her mouth, and she never rallied. Dr. G. F. Crooke, formerly pathologist to the General Hospital, made a post-mortem examination and stated that he had seen the same effects produced from lead-poisoning in the Potteries and also in an asylum at Dresden. He had no doubt that the deceased died from the effects of acute lead-poisoning. The practice of taking diachylon to bring on abortion is not an uncommon one in the locality referred to and in adjoining districts. Such conduct must be considered as highly reprehensible and dangerous.

## BALLOON NAVIGATION.

IN the *Archives de Médecine Navale* for June Dr. Le Dantec concludes an interesting article on "Climates in General and Hot Climates in Particular" with some observations on aerial navigation. In 1894 MM. Dex and Dibos proposed to cross the African continent in a balloon from Inhabimbi on the eastern coast to St. Paul de Loanda on the western, making use for the outward journey of the *alizés* or trade-winds which blow periodically at a low elevation from the south-east and for the return journey of the compensatory currents which are to be met with on a higher level. So far, however, the project, though pronounced feasible, has not been attempted. An aerial traveller desirous of visiting Lake Chad or any part of Central Africa, instead of going all the way round by Senegal could take advantage of the north-eastern *alizé* in order to traverse the Sahara, starting either from Tunis or from some place in Tripoli. On the Asian continent the south-eastern monsoon might be utilised for the conveyance of building material and stores to the otherwise inaccessible Himalayan peaks, where observatories could with advantage be erected. Finally, in the opinion of the above-mentioned travellers, if it should happen that France were to find herself once more engaged in war with Germany it should be practicable to organise speedy and regular communication with Russia by means of the constant south-westerly winds. Doubtless, adds Dr. Le Dantec, these aerial itineraries may at first sight strike the reader as verging on the fantastic, but fifty years ago when Maury first published the results of his studies the schemes which he drew up were looked upon as equally visionary.

The event has proved that the distinguished American meteorologist was right in every particular. It may, in fact, be said that owing to his researches the duration of sailing voyages has been shortened by one half. Formerly the speediest vessels used to take 180 days between New York and California, but now they can cover the distance in 100 days or less. A well-found ship following the old route could not sail from England to Sydney and back under 250 days, but, since Maury pointed out the advantage of circumnavigating the globe *viâ* the Cape of Good Hope while outward bound and Cape Horn while returning, the double voyage can be done in about four and a half months. The cosmic laws formulated by Maury being equally applicable to aerial navigation Dr. Le Dantec believes that the time is not far distant when journeys above the surface of the earth will be undertaken as a matter of course. Andrée has made a commencement and his example will soon be followed in regions where nature has raised fewer barriers. In this connexion it is interesting to note that Lieutenant Hourst, a French officer who has already made a name as an explorer, is about to undertake a balloon voyage across Africa; so that it is possible that Jules Verne's "Dr. Ferguson" may at no very long interval of time become a real instead of fictitious person.

## THE TREATMENT OF CONTRACTURE OF THE BLADDER BY HYDRAULIC PRESSURE.

THE Johns Hopkins Hospital *Bulletin* of May contains an important paper on this subject by Dr. H. Young. Since the opening of the hospital in 1889 cystitis has been treated by vesical irrigation performed without the use of a catheter, hydraulic pressure being used to force the fluid through the urethra. It occurred to Dr. Young that this method might be used to dilate the bladder in cases of contracture from chronic cystitis. He reports eight cases, in all of which it proved most successful. For example, a man had suffered from severe chronic cystitis for 14 years. The urine was alkaline and contained pus and blood, and micturition occurred every 10 or 15 minutes. He had been treated in numerous hospitals with internal remedies and by local irrigations through the catheter with only temporary relief. Under hydraulic pressure 22 c.c. was the largest amount that the bladder would hold without severe pain. He was treated with irrigations of Thompson's fluid at a pressure of 4 ft. He rapidly improved, the urine became acid, the capacity of the bladder increased to 115 c.c. in 18 days and to 250 c.c. in 2 months, when he could retain his urine for 4 hours. A year after the treatment was begun there was no tendency to recurrence. Some points in the technique of Dr. Young's method may be mentioned. A conical urethral nozzle which will fit tightly the meatus is required. The patient lies on his back. The bag containing the fluid is elevated 3 or 4 ft. and the urethra is alternately distended and emptied to clean the anterior urethra; the nozzle is then pressed tightly into the meatus and the bag is raised to an elevation of about 7 ft. The urethra will become ballooned and for a time the flow will stop; soon the sphincters give way and the fluid enters the bladder and the patient experiences a sensation of fulness and gradually increasing pain. The nozzle is withdrawn and the fluid is ejected with considerable force. The operation is repeated until a quart of fluid has been used. Bland fluids, such as Thompson's or boric acid (2 per cent.), are the most satisfactory in general; silver nitrate (¼ gr. to 1 oz.) may be used occasionally. The effect of the dilatation is probably to separate or loosen bundles of fibrous tissue and to smooth out pockets in the mucous membrane and also to give the antiseptic the best opportunities of acting on the mucous membrane. Is there any danger of ureteral reflux and of the carrying of pus or organisms up to the kidneys? As a result of his clinical experience and of experiments on the cadaver and on dogs Dr. Young concludes that there is not.

## THE RETIREMENT OF SIR WILLIAM FLOWER.

ALL medical men will learn with regret that the state of Sir William Flower's health compels him to resign his appointment as Director of the British Museum, Natural History Branch, at South Kensington. Sir William Flower, K.C.B., who is President of the Zoological Society, was for twenty-three years conservator of the museum of the Royal College of Surgeons of England, in which capacity he earned the general admiration of the scientific world for his valuable contributions to the morphology and classification of the mammalia. He takes into his well-earned retirement the good wishes of his medical brethren, who are proud to remember that a man of such brilliant learning is a member of their own profession.

## NEW LABORATORIES AT THE LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE laboratories at the London School of Medicine for Women in Handel-street, Brunswick-square, which have been recently built, form a large block of four storeys and comprise a dissecting-room and laboratories for physiology, chemistry, and physics, with accessory rooms. The dissecting-room is on the second storey; it has a granolithic floor and a tiled dado, so that the whole room can be washed with a hose; above the dado slates for drawing are fixed and form almost a continuous row. The room is lighted by electric lamps and is ventilated by a turret and a cowl. The physiological laboratory is intended for 70 students and is fitted with benches; the three rows of benches which are nearest the windows are fitted for microscopic work, while a fourth row is intended for experimental physiology and has recording cylinders the revolutions of which are worked by an electric dynamo. An arc lamp is also provided for a magic-lantern and the window blinds are light proof so that the room may be completely darkened. The chemical laboratory is not yet completely finished; it will contain tables for about 70 students, and an adjoining room is fitted up as a private laboratory for the lecturer. The basement floor is intended for a physical laboratory. A second and a third block will have to be built before the buildings are complete. The second block is to be proceeded with at once; it will contain two lecture theatres, the library, a biological laboratory and other class rooms, and will cost about £5000. It has been necessary to erect the new buildings block by block, as the old buildings which are still in use have to be pulled down to provide the sites for the new buildings. On Monday, July 11th, the new buildings were opened by the Princess of Wales. The ceremony took place in the room which will be hereafter fitted up as the chemical laboratory. All of the buildings of the school of medicine were decorated with flags and flowers and very many spectators were present, including a large number of qualified medical women, former students of the school. All of them wore academic gowns and hoods. The Princess, who was accompanied by the Prince of Wales, was received by the dean of the school, Mrs. Garrett Anderson, M.D. Paris, who read an address of welcome, in which she said that since the school was started some 24 years ago the students had gained several gold medals at the London University and at the Royal University of Ireland. At present there were 170 students. Those who had passed out of the school and had obtained a medical qualification were engaged in responsible work as practitioners. Some were at the new hospital, others in workhouse infirmaries, asylums, and various provincial hospitals. Others were in India,

South Africa, China, and Australia. The block of laboratories which had just been erected, being part of the work of rebuilding the school, had cost between £9000 and £10,000. It had been paid for by donations, by a loan from the general funds of the school, and by the share allotted to the school from the Pfeiffer bequest. In memory of Mrs. Pfeiffer the wing would be named after her. After a prayer by the Bishop of London and an anthem by Madame Antoinette Sterling, the Prince of Wales, for the Princess, declared the building open. In the course of his speech he mentioned how fully the Princess of Wales and he sympathised with the desire of women to become qualified medical practitioners, and he thought that India and China offered an almost unlimited scope for the practice of medicine by women. It might have been thought, he continued, that medical men would resent the invasion of their province by women practitioners, but the presence of his friend, Sir William Broadbent, was sufficient proof that no such feeling existed. He had inspected several of the laboratories a few days before and he had been struck with the way in which they were fitted up. He had also paid a visit to the New Hospital for Women opened by the Princess of Wales about ten years ago, which was, he believed, officered entirely by former students of the school.

## OPERATION IN MICROCEPHALY.

IN the December number of the *American Journal of Nervous and Mental Disease* Dr. W. W. Keen contributes some interesting remarks on the advisability of operation in cases of microcephaly. His views are based upon the work and writings of others, but also on an experience of 18 cases of his own in which he had operated. Of these the youngest patient was eighteen months old and the eldest six and a half years. Five died after operation and of the 13 that recovered 6 were slightly improved and 7 were not benefited. So that in Dr. Keen's experience the prospect of improvement is not great and the improvement which may take place is only slight. The conclusions, therefore, are that in a moderate number of selected cases of a medium degree of microcephaly death will ensue as a result of the operation and in a small number slight improvement will follow, but in the majority no result, good or bad, will result from the operation. He does not think that a child with an average-sized head is a suitable case for operation nor, on the other hand, does he think operation justifiable in cases in which the head is excessively small. In patients of more than seven years of age he is of opinion that improvement is not to be expected and in all cases after operation the greatest attention must be paid to developing the child's faculties by education.

## ONLY A PAUPER AGAIN.

IN THE LANCET of June 25th we commented severely upon the disgraceful neglect of proper provision for the nursing of sick paupers at the St. Marylebone Infirmary Workhouse. England, it appears, is not alone in the crime of committing the most indefensible form of cruelty. There has recently been a Local Government Board inquiry into the administration of the Dumbarton Poorhouse which revealed a most scandalous state of things. The inquiry was undertaken at the request of the Old Kilpatrick Parish Council and the gentleman appointed to inquire was Mr. R. B. Barclay, who, curiously enough, is not only outside visiting officer for supervising outdoor relief but also has for the past twelve years acted as Inspector of Poorhouses and Poorhouse Hospitals, so that the Local Government Board in appointing Mr. Barclay set him to inquire into the efficacy of his own inspection, and we must compliment him warmly on the fact that he found that most of the charges formulated by the parish council were true. In his report upon the poorhouse hospital he mentions that the sanitary arrangements were defective; there were no fires in the wards at night; the nurses, an old woman aged seventy-three years and a younger woman aged forty years who is epileptic, sleep in the kitchen and can only be summoned at night by the patients knocking on the locked doors of the wards. The hospital dietary is the same as in the ordinary wards except when the medical officer orders special diet. It is satisfactory that Mr. Barclay considered that the governor and the matron did their best with the very limited material which they had at hand. Other portions of the report dealt with the administration of the poorhouse itself and many deficiencies were pointed out. The Old Kilpatrick Parish Council considered this report at a meeting held on May 9th and finally came to the conclusion that the Local Government Board should insist upon the House Committee resigning *en bloc*, also that the Local Government Board should be requested to at once make arrangements for carrying out the recommendations made in the report. It is true that the conditions in workhouses and workhouse infirmaries have improved greatly within the last forty years or so, but very much remains to be done. There is still not enough separation between the lazy loafer who enters a workhouse because he does not mean to do any work and the aged and the feeble who enter the same place on account of old age or sickness. The former class deserve no mercy and should be incontinently committed to prison and made to work. But the latter class are in every way pitiable and what they want is a rest house, not a workhouse. The difficulty of providing each class with its deserts ought not to be insuperable, but in the meantime such scandals as those upon which we have been commenting must not be allowed to recur.

## MUMPS WITHOUT INFLAMMATION OF THE SALIVARY GLANDS.

IT is gradually becoming more and more evident that the only essential element of an infectious disease is the invasion of the body by a specific microbe. The resulting symptoms and lesions are indefinitely variable. Of late years, partly from clinical observations, but mainly from bacteriological researches, the limits of these variations have been considerably extended. Lesions once supposed to be so characteristic that they entered into the definition of the disease may be entirely absent. Thus typhoid fever is not necessarily enteric; there may be no intestinal lesions. The pneumococcus, the most usual cause of acute pneumonia and the presence of which in other tissues causes the so-called complications of that disease, may attack these tissues and exempt the lung, producing a primary pneumococcic arthritis, pericarditis, &c. At a recent meeting of the Société Médicale des Hôpitaux Dr. M. A. Béclère read a case which showed without doubt that mumps may manifest itself by orchitis without parotitis or inflammation of the other salivary glands. This has already been stated by M. Laveran and seems to be well known in France, but it does not appear to have been observed in this country, though Dr. Eustace Smith states that the orchitis may exceptionally appear before the parotitis. A boy, aged fifteen years, was suddenly seized with violent headache, pyrexia, and repeated vomiting. On the fifth day the right testicle became painful. On the following day he was seen by a distinguished surgeon who finding orchitis with predominating epididymitis thought, as there was no urethritis, that the case was one of acute tuberculous orchitis, although the temperature was 104° F. Dr. Béclère saw the boy on the eighth day. He ascertained that three of his school-fellows had mumps and diagnosed the orchitis accordingly. Resolution was complete on the

fourteenth day. All doubts as to the diagnosis were soon removed, for his two sisters had typical attacks of mumps. Dr. Béclère pointed out that the diagnosis should be made by the history of an epidemic, the sudden onset of the illness, and the interval of four or five days between the general symptoms and the orchitis. The diagnosis is of importance if only to enable the practitioner to warn the patient's friends that atrophy of the testicle sometimes results.

## THE REPORT OF THE SELECT COMMITTEE OF THE HOUSE OF COMMONS ON PETROLEUM.

THE product of four years' labour has at length been placed upon the table of the House in the usual form of a blue-book report. The principal points in the report are that the committee recommend by a majority of one the raising of the flash-point to 100° F. Abel test; by a majority of 8 to 3 the regulation and construction of lamps; by a unanimous vote the regulation of storage and by a substantial majority the regulation of transport. Oddly enough, at the last sitting it was in the power of Mr. Collings and his friends to reverse the decision arrived at on June 24th. Two of the low-flash point partisans, however, refrained from voting and the chairman did not vote, and the report was finally adopted by a majority of one. It is unfortunate that an unanimous conclusion could not have been arrived at in accordance with the very great importance of the issue. We hope next week to deal fully with the report, copies of which have not been published up to the time of going to press.

## GEOLOGICAL MODEL OF LONDON AND SUBURBS.[1]

A MAP of London and the surrounding country on a convenient scale of size, with the natural elevations of the ground shown in relief and the character of the superficial strata distinguished by colours, is a valuable means of conveying topographical information and Mr. Jordan is to be congratulated on the excellent manner in which his idea has been carried out. The district delineated by him extends from Finchley and Woodford on the north to Croydon and Orpington on the south, and from Barking and Chislehurst on the east to Hampton Court and Harrow on the west. The map is drawn on thin sheet metal embossed to represent the elevations and enamelled in eight different colours showing the nature of the ground. It has a handsome appearance and the black lines marking the various roads, streets, railways, &c., as well as the names of places, are as distinct as on a map printed on paper. The horizontal scale is 1 in. to the mile, and as it measures 15½ in. from north to south and 20 in. from east to west the area included is obviously about 320 square miles. The vertical scale is 1 in. to 1000 ft., which is of course about five times as great as the horizontal scale, so that some of the steep inclines about Highgate and Muswell-hill have the appearance of being impracticable for any kind of wheeled vehicle without cable traction. The predominant geological formation is gravel and sand, which stretch across the map from south-west to north-east; London clay covers large tracts in the north-west and southern portions of the district; lower London tertiary deposits are found abundantly to the east of a line drawn from Croydon to Greenwich. The other formations shown are of less extent and consist of alluvium, brick earth, boulder clay, Bagshot sand, and chalk. Vertical sections of the various strata are represented on the frame, some of them being over 1000 ft. in depth. The map is provided with rings on the back by which it may be hung against the wall of a room like a picture. Mr. H. B. Woodward's memoir on the Soils and Subsoils of London and its Neighbourhood, reviewed in THE LANCET of Feb. 5th (page 372), may be advantageously consulted in connexion with the subjects of the map.

[1] By James B. Jordan. London: Edward Stanford. 1898. Price 15s.

## THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE practical and delicate work of distributing the receipts of this Fund is now proceeding and by the kindness of Sir Savile Crossley, the honorary secretory of the Fund, we are able to tell our readers something of what is being done. The metropolitan area has been divided into four districts, North, South, East and West, the areas being as nearly as possible equal in the number of hospitals and the total number of beds. To define the boundaries of such areas was no simple matter. Each quarter has been assigned to a divisional sub-committee. Each sub-committee consists of five members, of whom two are thus far experts in hospital management that they are members of the medical profession, the other three being laymen, but men of business and interested in hospital work. One expert and one layman visit each hospital in the district and report upon it, and this is the work which has already been started; but it is considered undesirable until the work is complete to publish the names of the gentlemen who have so kindly undertaken the onerous task of serving on these sub-committees. It is hoped, however, that the names may be given later. At present the sub-committees are confining their visits and inquiries to those hospitals which applied for a grant in accordance with the advertisements inserted in the newspapers on May 17th and 24th, stating that all applications are required to be made by the end of June. The consideration of other claims is for the time deferred. Our readers are thus able to see that the General Council of the Prince of Wales's Hospital Fund for London have started on their task with a full sense of their responsibility; and in our opinion the method adopted for arriving at the real needs and merits of the charities which have applied to them for assistance is an excellent one. It should be thorough without being offensive and result in a proper allocation of the benefits to deserving institutions.

## WATER GAS.

CARBON monoxide is an insidious poison, and since it is coming into increasing use, added in the form of water gas to coal gas, it is desirable that some control should be placed upon the public supply of gas so compounded. The gas derived exclusively from coal contains considerably over 5 per cent. of carbon monoxide, but of recent years this quantity in the gas supplied has very materially increased because at the gasworks it is now found expedient to enrich the gas by the addition of carburetted water gas. Water gas is a mixture of nearly equal proportions of carbon monoxide and hydrogen which serves as an excellent carrier of oil gas, the enriching mixture consisting of equal volumes of oil gas and water gas and being known as carburetted water gas. It is asserted that this step is necessary if the illuminating value of coal gas is to be maintained at the Parliamentary standard—namely, 16 candles. The supply of rich coal yielding a highly illuminating gas is said to have fallen short in recent years of the demands and thus the addition of carburetted water gas is adopted. The question as to whether this addition should be limited is at the present time occupying the attention of a Departmental Committee of the Home Office. We certainly are of opinion that some precise limit should be imposed, although hitherto we do not think any serious mischief has been done. Still without some definite system

of control mischief may be done, and as far as we know there is no law providing against the supply of pure carburetted water gas which would contain over 20 per cent. of deadly carbon monoxide. Coal gas is of course itself a poison and has been used successfully for criminal purposes, while cases of accidental poisoning from its use have not infrequently occurred. The danger would be greatly accentuated of course by a gas containing an increased proportion of carbon monoxide. Again, while carburetted water gas has a decided and distinct smell it is not so pronounced as coal gas, an important property of the latter which has undoubtedly sometimes prevented disaster. We do not suppose, however, that there would be any difficulty in endowing a gas for public supply with an unmistakeable smell. On reviewing the whole question, therefore, it is clear that some control must be placed upon the composition of the public gas-supply and that soon, before any serious charge can be laid at the door of the gas companies. The Public Control Committee of the London County Council has expressed its views to the Home Office, which are as follows:

(1) That considerable danger arises from the introduction of water gas in the process of the enrichment of coal gas; (2) that non-carburetted and non-odorised water gas should not be allowed to be used under any conditions, since it is devoid of smell which would give warning of any escape of the gas; (3) that 25 per cent. should be the *maximum* amount of water gas allowed to be introduced in the enrichment of coal gas, the proportion of water gas being ascertained by determining the amount of carbonic oxide in the enriched coal gas (coal gas enriched to this extent would correspond in poisonous character to the Dowson gas which is already in use for heating purposes and for gas engines, and would exclude the use of carburetted water gas); (4) that when it is proposed to supply poisonous enriched gas to houses and the interior of buildings a proper inspection be made of the service pipes by a responsible officer appointed by the local or other suitable authority, who should certify that the pipes are in a sound condition and that there is no escape of gas, and that the cost of such inspection be borne by the gas company.

We cordially agree with these suggestions and hope that the Government will soon see their way to embody them in a short Act providing for the control of the composition as well as for the quality of the public gas-supply.

## THE DRAINAGE OF SWANAGE.

IN our issue of Sept. 18th, 1897, we commented upon a report by Dr. S. W. Wheaton upon the sanitary condition of Swanage. Swanage is one of those places which the Local Government Board thinks necessary to inspect very frequently, for its drainage is disgraceful. In 1893 the town council borrowed £6000 to make new sewers which should discharge into the sea below low-water mark. The sewers were made, but up to now they still discharge on the foreshore. The *Bournemouth Guardian* has been publishing some very plain-spoken articles about the neglect of the work and these articles have naturally excited the ire of some of the members of the urban district council, so a motion was moved and carried that notice of the council meetings should not in future be sent to the *Guardian*. On July 11th the council met as usual and a *Guardian* reporter attended but was requested to withdraw. During the discussion one of the members is reported as saying "that in the *Guardian* everything was drainage—and nothing else but drainage. He thought the council should request the papers to place as little as possible in their columns concerning the drainage as it did injury to the town." Another member is reported as saying "that those who gave up their time for the benefit of the people of Swanage were not prepared to be held up to ridicule by some snobs on newspapers." At the risk of incurring the latter speaker's displeasure we must say that if the drainage scheme is not pushed forward and the other gross insanitary defects pointed out by Dr. Wheaton removed "those who give up their time for the benefit of the people of Swanage" will have a rude awakening. Visitors will rightly keep away from the town, but the Local Government Board will not, neither will typhoid fever. We suppose the council are within their legal rights in asking the *Guardian* reporter to withdraw, but even if so it was the worst thing from their own point of view that they could have done.

## THE HUXLEY LECTURE.

OUR readers will learn from an announcement which appears in our advertisement columns that Professor Virchow, of Berlin, has consented to deliver the forthcoming Huxley Lecture at the Charing-cross Hospital on Monday, Oct. 3rd, at 4 P.M. This lectureship was founded at the death of the late Professor Huxley out of a sum raised by the Medical School and its friends to commemorate the fact that Huxley received the whole of his medical education at Charing-cross. The lecture is a biennial one and the subject of that to be delivered by Professor Virchow is Recent Advances in Science and their Bearing on Medicine and Surgery. The first Huxley Lecture was delivered by Professor Michael Foster in October, 1896, and Professor Virchow's lecture on Oct. 3rd will be the second. The Charing-cross Medical School is to be congratulated on the honour which the most venerable and most distinguished of pathologists is willing to pay to the memory of perhaps the most honoured student of that school. It is now five years since Professor Virchow visited this country to deliver the Croonian Lecture for the Royal Society and those who took part in his reception on that occasion will not forget the interest which his visit excited or the cordial welcome which was everywhere extended to him. The Huxley Lecture will be delivered in English, of which language Professor Virchow is a master.

## MR. BALFOUR ON MEDICAL RESEARCH.

ON July 13th the First Lord of the Treasury distributed the prizes to the successful students at Guy's Hospital. After the prize-giving he addressed his audience in a telling speech. Commencing by paying a warm tribute of esteem to the nobility of the medical profession, and having referred to his recent election as a governor of the hospital, Mr. Balfour proceeded to point out how science was necessarily getting more and more specialised and that therefore medical men and those whom they would have to treat were being gradually compelled more and more to rely upon those whose work was mainly research. He continued:—

"The man who would succeed in research, the man who, at all events, desires to devote himself to research, must not be asked to burden himself with other labours. He has upon his shoulders not merely what I may call the specialised work of his profession, but he must have a sympathetic and appreciative eye to everything which is going on in other departments of science, so that even where he cannot follow those other departments minutely he knows by the instinct of genius where to pick up those new discoveries which may help his own special branch of research. For men of that kind I think we require further endowment. I have all my life been an ardent believer in the cause which is often laughed at—the cause of the endowment of research. In that cause I most firmly believe, and I think there is no branch of knowledge in which it may find a more useful field of application than in that of advancing medical knowledge."

These are noble words, and we only hope that the speech of Mr. Balfour may be some indication of the mind of the Government, although we do not mean it to be implied that

he was speaking in any other than a private capacity. The British Government has hitherto been indifferent to the endowment of research. Everyone will remember Pitt's answer to the modest request that the Government would grant a few thousands for the purchase of the Hunterian collection: "We want the money to buy gunpowder," was the only reply. This was in 1793, but it is fair to say that in 1799 the Government did buy the collection for £15,000. Compared, however, with foreign countries Great Britain is sadly deficient in State-aided laboratories or scientific endowment of any kind. At the close of his speech Mr. Balfour implied that he looked to those who already subscribed for the pure medical and surgical work of a hospital to endow research. We ardently trust, however, that his presence at Guy's Hospital may prove the earnest of a Government grant for research in the future.

## SYPHILIS OF THE STOMACH.

SYPHILITIC lesions of the stomach have been but seldom described. Possibly, as M. Dieulafoy has recently asserted, they are not so uncommon as is supposed, for when they come under clinical observation it is usually as ulcers of the stomach and the symptoms do not differ from those of ordinary ulcer. Gummata have been found at necropsies, but as a rule they produce symptoms during life only when they ulcerate. A case such as the following, published in *La France Médicale*, July 1st, 1898, by Dr. Dubuc, is very exceptional. In 1880 and 1881 he treated a man for primary and secondary syphilis and in 1884 for a tubercular syphilide on the forearm. In 1891 he detected in the epigastric region a large indurated plaque of the size of the palm of the hand, with a projection having the volume of a pigeon's egg. It was situated behind the abdominal wall and no doubt in the wall of the stomach. It was separated from the liver by a narrow resonant zone and was elevated by the pulsations of the aorta. The patient had wasted, digestion was slow and difficult, and there was pain in the affected region. Mercury and iodide of potassium were given; the plaque appreciably diminished in a week, and was found to have entirely disappeared when the patient was seen four months afterwards. M. Dieulafoy's advice to inquire for a syphilitic history in all cases of gastric ulcer and to treat accordingly is sound.

## THE PROSPECTS OF NEW LEGISLATION ON POISONS AND FOOD.

WE must express our satisfaction with the steps which, as announced by Mr. Balfour in the House of Commons on Tuesday, the Government propose to take in regard to two measures in the progress of which we are interested. The Poisons Bill has been thrown over definitely and, in the words of Mr. Balfour, the Government have abandoned all hope of passing it into law. Last week we expressed the opinion that the Bill was unsatisfactory and not only so, but likely if passed to interfere with, if not to nullify, the good being done by the present Pharmacy Act. We take it that the Government found it expedient to drop this Bill on account of the opposition shown to it. It was certainly pushed through the House of Lords by the Duke of Devonshire with extraordinary rapidity. Indeed, it passed the House of Lords practically without discussion. As we said last week, if a really protective measure is to become law the Bill introduced by the Duke of Devonshire must be very seriously altered and amended. We receive, therefore, the announcement of Mr. Balfour with satisfaction and may now hope that a more satisfactory measure will be drafted in the future. It is hardly possible that the new Food and Drugs Bill will be passed this session, but at any rate it is to be introduced at an early date—probably next Tuesday. We believe that the new Bill is a very comprehensive measure, and it will, there is little doubt, give rise to considerable discussion. The terms, we believe, of its provisions are much in a line with those of the Bill introduced in January, 1897, which was dealt with at some length in a leading article in THE LANCET of March 6th, 1897. We should very much like to see it pass speedily, because we believe the Bill to be a good one and calculated to check the many fraudulent practices which now so artfully escape punishment under the present *régime*.

## DEADLY ICE-CREAMS.

ANOTHER case is reported of a death presumably due to the eating of ice-creams. The victim was a child aged three years. The medical man in attendance deposed at the inquest that on the previous day he had seen two similar cases in the same street in Hoxton. Surely the authorities should do something in the matter. Is the liberty of unlicensed killing to continue indefinitely? There is proof, circumstantial, bacteriological, and positive, of the deadliness of the filthy "hokey-pokey" and it is high time that regulations were made with regard to its manufacture.

DR. CORNELIUS HERZ, whose death occurred at Bournemouth recently, was a medical man, but his place in science was won by his practical work in electricity. His death was due to angina pectoris and in its mode of onset sufficiently justified the opinion of the well-known English physicians who refused to take the responsibility of saying that he was in a fit state to appear at the Extradition Court.

THE Queen has sent a donation of £20 to the fund for the proposed children's wards in the Kensington Dispensary.

DR. LOMBE ATTHILL has been elected an Honorary Fellow of the Edinburgh Obstetrical Society.

# A REPORT ON PELLAGRA IN TRANSYLVANIA.[1]

THE south-eastern part of the Carpathian Mountains forms the boundary between the kingdoms of Roumania and Hungary. Its slopes on both sides are inhabited by the Wallachs, now called Roumanians. They have the same habits and religion, the only difference being that the people on the northern side owe allegiance to Hungary, whilst those on the southern are subjects of the King of Roumania. They are supposed to be the descendants of the legionaries of ancient Rome who were stationed in these parts in the time of the Emperor Trajan and his successors. These people are very poor and live under highly insanitary conditions. Pellagra, which, as is generally known, prevails in certain districts of Italy as an endemic disease, has apparently been unknown hitherto in these parts, at any rate as far as the authorities and the medical profession generally are concerned, but it has recently attracted the notice of sanitarians in the shape of an endemic outbreak. To inquire into the circumstances of this outbreak the Hungarian Government appointed a Commission, consisting of Dr. Niedermann, Dr. Konrád, and Dr. Farkas, which has just presented its preliminary report to the Minister of the Interior at Budapest. The Commission commenced its labours in April last by visiting the villages where the disease was known to prevail, and at the termination of this inquiry it made the preliminary report referred to above from which we glean the following.

It appears that about fifteen years ago Dr. Takách, of the county of Kövár, noticed in his neighbourhood some

[1] **A Pellagra: Niedermann Gyula tr., Konrád Jenö tr. és Farkas Jenö tr. jelentése az erdélyi megyékben felépett pellagra megbetegedésekről. (Pellagra: A Report of Dr. Gyula Niedermann, Dr. Jenö Konrád and Dr. Jenö Farkas on Pellagra Cases which occurred in some of the Counties of Transylvania.)**

suspicious cases of skin disease which he named pellagra and described it as such in the medical journals; but owing to doubts expressed by a dermatologist at Budapest as to the correctness of the diagnosis the subject was dropped. Last year, at the International Plague Conference in Venice, the Hungarian delegate, Dr. Chyzer, met Dr. Felix, a delegate of Roumania, and learning from him that pellagra frequently occurs on the southern slopes of the Carpathians he was induced to visit the provincial hospital of Venice and to study some of the cases of pellagra there. On his return to Budapest he gave directions to the chief physician at Kolosvár and to the physician in charge of the lunatic asylum in that city to pay special attention to cases of pellagra, and at the same time he entered into correspondence with Dr. Felix of Bucharest and with several medical practitioners in Transylvania. Dr. Takách was the first to send a patient suffering from pellagra from the town of Somkút to the clinique at Kolosvár; this was on April 19th last. Dr. Lechner, Professor in the University of that city, confirmed the diagnosis and submitted the case to the Commission. The following, taken from their report, may serve as a fair type of cases described.

A married man, aged twenty-six years, of feeble constitution, a farmer, was born of healthy parents in the county of Szathmár. When seven years old his foot was injured by a thorn and periostitis ensued. The part became considerably swollen and he was for a long time under treatment in a hospital, where he underwent an operation, but the suppuration, owing to diseased bones, still continued. At the age of eighteen years he married. His habits were temperate, his ordinary diet consisting of porridge made of Indian corn, wheat-bread, bacon, eggs and milk. Since last autumn his diet has consisted exclusively of Indian corn mixed with wheat-flower. In the spring of 1897 there appeared an affection on the skin at the back of his hands. He became excited, spoke and acted confusedly, and walked about aimlessly, stopping people in the street and saying that he was in search of a wife, although he was already married. By the end of spring the skin disease had disappeared and his brain symptoms had improved, but it was nevertheless thought that he still suffered from hallucinations. In March, 1898, his hands, face, and neck became swollen and erythematous, and his skin grew fissured and knotty and covered with scales and was peeling. He again became excited and spoke and acted in a confused manner and, his agitation increasing, he ran away from home and made attacks on men and on animals. The patient's restlessness subsided on his admission into the hospital, but he became apathetic and stupid, had illusions, saw spectra, heard strange sounds, and refused to take food.

After establishing the diagnosis of the above case as pellagra, other cases of the disease were recognised at the clinique of the University of Kolosvár by Dr. Purjesz and Dr. Marsalko, 11 of which were seen by the Commissioners. On May 20th, 1898, they visited the village of Nagykalota, where in former years the food of the inhabitants was wheat and rye, but this year it was Indian corn. A miller there stated that this year no pure wheat was ground in his mill, although formerly he had a good deal to grind, and he added that "pigs fed better formerly than men do to-day." Last summer many people suffered from malaria and still continue to do so to a certain extent. The village rates amount to 106 per cent. of the ordinary taxes. The Commissioners also examined numerous cases in sixteen different villages with the same result. The symptoms were of the type described above. The disease may be said to be the result of insufficient nourishment aggravated by bad hygienic conditions and by malaria. No cases of pellagra could be detected where the people had good and sufficient food.

The Commissioners conclude their report as follows: "From the above examinations of many cases we arrived at the conclusion that under similar dietetic and hygienic conditions pellagra in an endemic form will be found in other parts of the country. Before submitting a final report we may place our opinion on record that the exclusive use of Indian corn as food is the ultimate cause of pellagra and the nutriment of the people in those places was this year even worse than usual, because (1) the crop last year was of an inferior quality; (2) for the last three years there prevailed a murrain among the flocks, particularly among the pigs; and (3) the flocks of sheep have likewise suffered severely, the consequence being that the people have had no animal food during the winter. All this was aggravated by the continuous rains of last year which produced malaria."

## THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-ninth sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Monday, July 11th. The only Commissioners present were the Chairman (Lord Llandaff), Major-General Scott, Mr. de Bock Porter, and Mr. Robert Lewis. The first part of the sitting was occupied by taking the evidence of Mr. Andrew Johnston (chairman of the Essex County Council), Mr. W. B. Whittingham (chairman of the Water-supply Committee of the Essex County Council), Mr. William Ivey (Mayor of West Ham), Mr. Frederick Ernest Harris (treasurer of the borough of West Ham), Mr. W. K. Marriott (chairman of the Barking Urban District Council), and Mr. Alfred Plant (accountant to the East Ham District Council). After the adjournment for luncheon evidence was given by Mr. T. L. Knight (chairman of the East Ham Urban District Council) and by Mr. C. G. Musgrave (chairman of the Leyton Urban District Council); and Sir John Evans, K.C.B. (vice-chairman of the Hertfordshire County Council), put in a statement on behalf of the county which he represented and was examined at some length.

Mr. JOHNSTON, in answer to the CHAIRMAN, said that the population of the geographical county of Essex according to the census of 1891 was 785,445 and that of the administrative county 578,471. The county borough of West Ham was entirely within the limits of supply of the East London Waterworks Company. The county council of Essex and the borough of West Ham had acted in concert with a view to opposing the London County Council's Water Transfer Bills. They were, however, willing to come to an arrangement with the London County Council on certain conditions and an agreement was drawn up last year but it was never "signed and sealed." The arrangement was, briefly, that the London County Council should hand over to the Essex authorities the supply and distribution of water within that county. In the county of Essex there were besides the county borough of West Ham ten separate local authorities which were either wholly or partially supplied by the East London Waterworks Company. These districts were Walthamstow, Leyton, Wanstead, East Ham, Woodford, Buckhurst-hill, Chingford, Waltham Holy Cross, Ilford, and the Epping Rural District Council area (Loughton and Chigwell). The Barking Local Authority was also within the company's limits of area and might at any time require a supply of water. The witness thought it was not expedient that ten or more separate water authorities should be formed within the Essex district of supply of the East London Waterworks Company, and that might happen if the powers contained in a clause of the East London Waterworks (Purchase) Bill introduced by the London County Council last year had received Parliamentary sanction. Most of the districts of the local authorities which had been mentioned are supplied by mains passing through one or more other sanitary districts, and had one or more of the local authorities availed themselves of the powers proposed by the London County Council's Bill and undertaken the distribution of water in their respective districts the arrangements would have become very complicated, and if the various parts of the undertaking became vested in a number of different local authorities they would necessarily have to employ additional officers and servants in each district, and the result would be a very heavy expense which would fall directly on the ratepayers.

In answer to Mr. DE BOCK PORTER the witness said that the Essex County Council was not anxious to become the water authority, and they feared that a change from the present arrangement would have the effect of making them pay more for their water. The gross charge for water supplied by the East London Waterworks Company given on an average of six years had been 4·21*d.* per 1000 gallons and the average cost throughout the whole of the London water companies' area had been over 6·97*d.* The witness thought that had the undertakings been purchased by the London County Council they might have tried to charge the Essex district the average price charged for water over the whole of the metropolitan area of supply and in his opinion the East London authorities would be at a disadvantage either in the case of negotiations or

arbitration if they had any dispute with regard to charges with so rich and so powerful a body as the London County Council and in his opinion they were in danger of having to pay as much as 66 per cent. more for their water than they do at present. In the case of purchase of the metropolitan water companies' undertakings by the London County Council the Essex authorities had drawn up a statement of their opinions which were that—

1. The London County Council should be subject to all the liabilities of the East London Waterworks Company. 2. That a provision should be made enabling the Essex County Council to promote and pay the costs of promoting a Bill to constitute an Essex water authority (with or without the county borough of West Ham), and to authorise such water authority to purchase, on terms to be settled by arbitration, such portion of the undertaking of the East London Company which by the Act might become vested in the London County Council as might be necessary for the purpose of a supply of water both as regards present and future needs within their district. 3. That the said water authority might purchase the Essex portion on the same terms as the London County Council might acquire the whole undertaking of the company. 4. That the Essex County Council or the water authority might at any time within two years from the passing of the Act purchase the Essex portion. 5. That until an Essex water authority were formed the consumers within the Essex district should not be charged a higher rate for the supply of water than they then paid.

The Essex County Council had also passed the following resolutions in reference to their policy on the water question. On April 7th, 1896, the following resolution was passed:—

That the council have considered the Metropolitan Counties Water Board Bill and the proposed resolutions submitted by the Chairman of the Surrey County Council. That they find some provision is made in the Bill for the representation on the proposed water board of the districts outside the county of London, though leaving the outer districts in a minority, but at this stage they are not prepared to offer other comment on the Bill than the following: That a clause be introduced protecting the outside districts from any possible liability to contribute to the cost of bringing water to London from a great distance without the consent of their representatives, inasmuch as the outer districts have abundant sources of supply for themselves within their own areas which they should have the right to retain.

And again on Jan. 5th the following resolution was passed:—

That the President of the Local Government Board having asked for a formal statement of the views of the council as to proposed legislation in the matter of metropolitan water-supply a reply be sent as follows: (*a*) That if the metropolitan water area within the county can be assured of acquiring an adequate proportion of the sources of supply now used by the East London Water Company within such area a separate water authority be formed for such area, combined, if possible, with the county borough of West Ham, otherwise the Council would prefer representation on a general metropolitan water-trust. (*b*) That in any water-trust Bill a clause should be introduced protecting the outside districts from any possible liability to contribute to the cost of bringing water to London from a great distance without the consent of their representatives, inasmuch as the outer districts have abundant sources of supply for themselves within their own area which they should have the right to retain.

In answer to the CHAIRMAN the witness said that the parts of Essex not supplied by the East London Waterworks Company were partly supplied by the South Essex Water Company and by the Essex and Hertfordshire Water Company. In rural districts the water of "old horse ponds" was still used. The witness said that as far as he was concerned he was satisfied with the water supplied by the East London Waterworks Company.

Mr. W. B. WHITTINGHAM, in answer to the CHAIRMAN, said that complaints had been made with regard to the inadequacy of the supply by the East London Waterworks Company during periods of drought and of frost. If the London water companies' undertakings were purchased he thought the control should be vested in the Essex County Council.

Mr. WILLIAM IVEY, in answer to the CHAIRMAN, said that the county borough of West Ham was joined to the metropolis to the east of the River Lee and was divided from it by that river. The population of the borough was growing very quickly. Thus in the year 1851 the population was 18,807; in 1861, 37,639; in 1871, 63,969; in 1881, 128,953; in 1891, 204,903; and in 1897, 273,652. The borough contained a large number of business premises. The works of the Great Eastern Railway Company, the whole of the Victoria Docks, and part of the Albert Docks were within the borough. There were also large sugar, soap, and candle factories. The existence of all these factories depended on a constant supply of water. In the years 1894, 1895, and 1896 there was considerable dissatisfaction in the borough because of the dearth of the domestic water-supply, and for a great part of the time the borough was either without water altogether or on a very short supply. The witness considered that the River Lee was the natural watershed for the supply of West Ham, and if there was any amalgamation of the water companies the town council thought that a proper provision should be made for districts beyond the metropolitan area. The witness said that he believed that the East London Water Company had taken measures to prevent any repetition of the deficiency of the water-supply and subject to the question of the adjustment of the rating for water purposes and subject also to the application of the Water-rate Definition Act of 1855 to the West Ham district he did not think there was any reason why matters should not remain as they are at present. In the case of purchase of the East London Waterworks' undertakings he thought that looking at the magnitude of the area, the number of the population, and the vastness of their interests in the question, it would be most desirable that the Government itself should deal with the matter. But, failing that, if the water undertakings were acquired in any other way the corporation thought that they ought to have powers and privileges conferred upon them similar to those which had been arranged between the London County Council and the Essex County Council in case of the purchase of the undertakings by the former body. The matters which had not been satisfactory in the past were (1) that there had not been a constant supply; (2) that the supply had been insufficient in quantity; and (3) that the charges for water-rents were not fairly made. The charges had been levied on the "annual value," not on the "net rateable value." The question as to the legality of the charges had, however, not been raised in a court of law.

Mr. FREDERICK ERNEST HARRIS, treasurer of the county borough of West Ham, said that the people of West Ham had a distinct grievance against the East London Waterworks Company with regard to the charges levied for water-rents. By the Water Rate Definition Act of 1885 the words "annual value of the tenements supplied with water" are defined as follows: "The words 'the annual value of the tenement supplied with water,' in the 68th Section of the Waterworks Clauses Act, 1847, shall within the unions and parishes to which the Valuation of Property (Metropolis) Act, 1869, extends, mean the rateable value as settled from time to time by the local authority as duly constituted." West Ham being outside the metropolis the words "annual value" are not defined by statute, and the East London Waterworks Company themselves determine what is the "annual value" and the water consumer, if aggrieved by the company's decision, has either to pay or to appeal to two justices. The practical result of the present state of things is that the company arbitrarily prescribe the charges for water and have adopted scales of charges which purport to represent the statutory charge of 5 per cent. upon the "annual value" and no information is given to the water consumer as to how the East London Waterworks Company's "valuation" is made. The witness had compared the rateable values as appearing in the ratebooks of the borough and found that the company's charges in West Ham were considerably higher than those which obtained in London. The witness had prepared two tables, one showing the rates charged in the case of cottages in which the landlords paid the rates and taxes, the other in the case of houses in which the tenant paid both rates and taxes. These tables showed that the amount of water rent charged in West Ham was higher than the water rent charged in London. For example, in the case of a cottage for which the rent was 8*s.* a week the water rent charged in West Ham was 12*s.* 6*d.*, and in London 11*s.*, the difference being 13½ per cent. In the case of a house of the rental of £30 a year in which the tenant paid the rates and taxes the water rent charged in West Ham was 26*s.* and in London 24*s.*, the difference in this case being 8½ per cent.

In answer to the CHAIRMAN the witness said there was no reason to justify this excessive charge on the part of the East London Waterworks Company.

Mr. W. K. MARRIOTT, chairman of the Barking Urban District Council, said that the whole of the district which he represented was in the area of supply of the East London Waterworks Company, but that company did not at present supply any part of it. The district was also within the Parliamentary area of the South Essex Waterworks Company. The population of that district was over 20,000. The Barking District Council were of opinion that in the event of the East London Waterworks Company being acquired by the London County Council a water trust should be formed composed of representatives from the various districts affected. The Barking District Council, however, did not agree to the proposal made by the Essex County Council that that body should be constituted the

Essex water authority representing the part of Essex within the East London Waterworks Company's limits of supply. The Council were of opinion that an authority constituted by the Essex County Council would not fairly represent the urban area of the district and they therefore submitted that if a water authority were formed it should be composed of persons representing the consumers directly and should be a popularly elected administrative body, and they suggested that the members should be elected from the several districts interested in proportion either to the population or to the rateable value of the districts supplied. If it were decided to allow the local authorities to obtain a sufficient water-supply for their own requirements the council were prepared to obtain such supply or to purchase water in bulk.

In answer to Mr. ROBERT LEWIS the witness said that the South Essex Waterworks Company obtained part of their supply from a well at Grays. The water supplied was all well water.

Mr. ALFRED PLANT, accountant to the East Ham Urban District Counncil, in answer to the CHAIRMAN said that the district of East Ham joined the county borough of West Ham. It was in the area supplied by the East London Waterworks Company. The population, which in 1891 was 32,713, was now estimated at 70,000. The area of the district was 3266 acres and the number of houses 14,500. The requirements of the district were similar to those of the county borough of West Ham. The area of supply of the East London Waterworks Company was confined in this direction to the districts immediately adjoining the metropolis, and the East Ham District Council were in favour of a joint Water Trust being formed for that part of Essex which was within the metropolitan area of water-supply, but they thought that the trust should be distinct from the London County Council. With regard to the difference of the charges of the East London Water Company in their metropolitan and extra-metropolitan districts tables were handed in showing that the charges made in East Ham were greater than those made in the case of similar cottages and houses within the metropolitan area.

Mr. C. G. MUSGRAVE, chairman of the Leyton Urban District Council, in answer to the CHAIRMAN, said that the district which he represented adjoined the metropolis and West Ham and was separated from the former by the river Lee. The whole of the district was within the area of supply by the East London Waterworks Company. The population of the district was nearly 90,000, comprised an area of 2491 acres, and contained about 15,500 houses. In the opinion of the Leyton UrbanDistrict Council it would not be possible for the Essex County Council to fairly represent them with regard to management of their water-supply. Should a new water authority be constituted the council were of opinion that—

1. Such authority should be constituted of persons directly representing the consumers. 2. That the supply of water should be directed by a popularly elected administrative body. That, in the event of Leyton being able to obtain a supply sufficient for its own purposes, the council would be prepared to acquire such supply, or as the supply is within the district of Leyton the council would be prepared to purchase water in bulk at cost price and distribute. 3. That in the event of Leyton being unable to obtain such supply limited to its own district a body should be elected from the various districts for which such supply is required in proportion to population of the districts supplied.

The witness said that his district suffered in the same way as West Ham from the overcharges of the East London Waterworks Company. They had also to complain that the supply was not constant. Last year no water could be obtained in the case of a fire. The East London Waterworks Company's officers had suggested that the fire brigade did not know their duty. The witness was of opinion that the fire brigade was an extremely efficient one and that there was no water available at the time of the fire.

Sir JOHN EVANS, K.C.B., in answer to the CHAIRMAN, said that he was vice-chairman of the Hertfordshire County Council. He had been desired by the Parliamentary Committee of the council to lay before the Commissioners a statement as to the best method of dealing with the question of the water-supply in the interests not only of the County of London but also of the outside areas. His statement dealt with the questions of the advisability of purchase or control, as to how control might affect the question of the quality and the quantity of the water supplied and also its effect on the charges. Purchase and control were considered as they affected the outside areas. In addition to this he had dealt with the question as to what additional powers of control were needed, as to the control of the abstraction of undergound water, and finally he made suggestions as to a new Waterworks Clauses Act. There were also notes on the existing acts for the control of the water supply in the metropolitan water area.

In answer to the CHAIRMAN the witness gave evidence with regard to the effect of pumping by the New River Company. In the opinion of the witness the effect of the uncontrolled pumping by the New River Company had been (1) that wells in Ware in summer are frequently pumped down; (2) that the springs and streams in the neighbourhood of the Amwell Marsh and Amwell Hill pumping stations are pumped dry by those wells when working; (3) that the water which stands in the ditches and ponds in the Lee Valley is affected by the pumping from the companies' wells; (4) that the well at Haileybury College is pumped down; (5) that the well at Beaumont Manor was pumped dry; (6) that the Barnet Water Company find the water in their well failing off yearly; (7) that the Cheshunt District Council's well has given out; (8) that the flow of the Ash, Rib, Quin and Beane tributaries of the Lee has fallen off; and (9) that the flow of the River Lee has been insufficient for the East London Company. The witness thought that no well ought to be sunk by a water company except under the authority of Parliament contained in a special Act. In his opinion an Act ought to be passed which provided that all companies proposing to construct and obtain their supplies from wells should be under an obligation to afford supplies of water to those in the neighbourhood of the proposed wells whose water-supply might be affected by pumping from them. He thought also that companies ought to be controlled by being compelled to afford a sufficient supply of water at a reasonable rate, so that the water consumers might get the benefit accruing to the companies by reason of the practical monopolies which had been conferred on them and he suggested as the lines upon which a solution of the present difficulties might be found: (1) a careful reconsideration of the existing powers to charge for water which are in the hands of the companies with a view to ascertaining whether those powers might be modified in such a way as to secure lower water charges and uniformity of charge over the whole of the metropolitan water area; and (2) a reconsideration of the limitations under which the companies are now required to issue their capital and the amount of dividends which they may pay.

The next sitting will be held on Monday next, July 18th, at the Guildhall, Westminster.

## MEDICAL REFORM AT LEWISHAM.

A WELL-ATTENDED meeting of the medical profession of Lewisham and the neighbourhood was held at the Infirmary, Lewisham, on July 6th to hear an address from Mr. R. B. Anderson, as representative of the Corporate and Medical Reform Association, Limited, on "Practical Measures for the Prompt Attainment of Corporate and Medical Reform and for the Maintenance of the Rights and Promotion of the Honour and the Interests of the Medical Profession." Dr. F. S. Toogood, medical superintendent of the Infirmary, presided.

Mr. ANDERSON'S address dealt with what he considered to be the principal evils and abuses which afflict and injure the profession and the public, and showed them to be due to the exclusion of the body of the profession from influence in and control of the corporations, a position which he said could be remedied only by combined action of the profession and the public for obtaining from the State facilities for the self-government of the profession.

It was moved from the chair, seconded by Mr. F. S. BARNETT (Lewisham), and carried unanimously:—

That this meeting of registered medical practitioners of Lewisham and the neighbourhood, constituents of various medical corporations, supports the principles and policy of the Corporate and Medical Reform Association, Limited, and will coöperate collectively and individually by every constitutional means in promoting its measures, particularly combined action of the medical profession and the public to effect the reforms desired.

It was then moved by Mr. F. S. BARNETT, seconded by Dr. J. P. HENRY, and carried *nem. con.*:—

That a provisional committee of members of or joining the association be appointed, with power to add to its numbers, to act with the association in approaching public men and public bodies, medical and

lay, to invite coöperation in the south-east district of London and throughout the county of Kent in organising a county of Kent branch.

A local committee was then formed with Mr. F. S. Barnett (Lewisham) as local hon. sec.

The meeting terminated with votes of thanks to Mr. Anderson and to Dr. Toogood for receiving the meeting and presiding.

## MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT.

THE following is a list of medical referees who have been appointed by the Secretary of State for England and Wales for certain county court circuits in respect of which the arrangements are for the present complete :—

*Circuit No. 1.*—Dr. George Hare Philipson, Dr. Frederick Page, and Dr. George Haliburton Hume, Newcastle-on-Tyne; Mr. Charles Clarke Burman, Alnwick; and Dr. William Bertie Mackay, Berwick-upon-Tweed.

*Circuit No. 2.*—Dr. Selby Wetherell Plummer, Durham; Mr. Thomas Alexander McCullagh, Bishop Auckland; Dr. James Murphy, Sunderland; Dr. Robert Anderson, Seaton Delaval; Dr. William Mearns, Gateshead; and Dr. Frederick Hughes Morison, West Hartlepool.

*Circuit No. 4.*—Dr. James Arthur Rigby and Dr. Edwin Moore, Preston; Mr. Arthur Stanley Barling, Lancaster; Dr. Leonard Greenham Star Molloy, Blackpool; Dr. John Michael Harding Martin, Blackburn; and Mr Oswald Samuel Wraith, Darwen.

*Circuit No. 6.*—Mr. George Gibson Hamilton and Mr. Joseph D. Crawford, Liverpool; Mr. Robert Meredith Littler, Southport; and Mr. Charles Stuart Pethick, Woolton, Liverpool.

*Circuit No. 7.*—Dr. George Harry Cooke, St. Helens; Mr. Damer Harrison, Liverpool; and Mr. Joseph Collier and Mr. Herbert Lund, Manchester.

*Circuit No. 11.*—Dr. James Mackenzie, Burnley; Mr. William Henry Ellis, J.P., Shipley; and Mr. William Henry Horrocks, jun., and Dr. Henry Johnstone Campbell, Bradford, Yorks.

*Circuit No. 12.*—Dr. Thomas Michael Dolan, Dr. John Crossley Wright, and Dr. Alfred Mantle, Halifax; and Dr. Thomas Kilner Clarke and Mr. Peter MacGregor, Huddersfield.

*Circuit No. 17.*—Dr. William Arthur Carline and Mr. William John Cant, Lincoln; Dr. George Skelton Stephenson, Grimsby; and Dr. Arthur Tuxford, Boston.

*Circuit No. 20.*—Mr. Claude Douglas, Mr. Frank Montague Pope, and Dr. Thomas William Gordon Kelly, Leicester; Mr. Joseph Balm Pike, Loughborough; and Dr. William Newman, Stamford.

*Circuit No. 21.*—Mr. Harry Gilbert Barling and Dr. William Turberville Farncombe, Birmingham.

*Circuit No. 23.*—Mr. Henry Hammond Smith, Stourbridge; and Mr. John Lionel Stretton, Kidderminster.

*Circuit No. 24.*—Dr. William Taylor and Dr. Charles Tanfield Vachell, Cardiff; Mr. Octavius Edward Bulmer Marsh and Dr. Samuel Hamilton, Newport, Mon.; Mr. W. Edwin Williams, Abertillery, Mon.; and Dr. William Dyne Steel, Abergavenny.

*Circuit No. 31.*—Dr. James Fenton Stamper, Pembroke Dock; and Mr. Evan Evans and Mr. David James Williams, Llanelly.

*Circuit No. 33.*—Dr. Michael Beverley and Dr. Hamilton Ashley Ballance, Norwich.

*Circuit No. 35.*—Mr. Walter Gifford Nash and Mr. Edward Colby Sharpin, Bedford; and Mr. George Borthwick Mead, Cambridge.

*Circuit No. 42.*—Mr. James Berry, 60, Welbeck-street, Cavendish-square, W.; and Mr. William Bruce Clarke, 51, Harley-street, W.

*Circuit No. 43.*—Mr. Christopher Heath, 36, Cavendish-square, W.; and Dr. Herbert Campbell Thomson, 34, Queen Anne-street, W.

*City of London.*—Dr. William Murray Leslie, 23, Fenchurch-street, E.C.

## METROPOLITAN HOSPITAL SUNDAY FUND.

THE following were among the principal amounts received at the Mansion House up to Wednesday last in aid of this Fund. The total now amounts to £37,000 :—

| | £ | s. | d. |
|---|---|---|---|
| St. Mary Abbotts Kensington :—Parish Church, £330 9s. 4d.; St. Paul, Vicarage Gardens, £154 5s. 0d.; Christ Church, Victoria-road, £99 10s. 3d. ... ... ... | 584 | 4 | 7 |
| The Very Rev. The Chief Rabbi, from London Synagogues, including: Great Synagogue, £260 10s. 2d.; New West End, £113 7s. 6d.; Bayswater, £88 7s. 0d.; Central, £77; Hampstead, £55 19s. 2d.; St. John's Wood, £37 9s.; North London, £31 12s. 6d.; Maiden-lane, £23 2s.; Dalston, £20 9s. ... ... ... ... ... ... ... | 855 | 18 | 9 |
| Conference Hall, Mildmay-park ... ... ... ... ... ... | 23 | 15 | 7 |
| St. Thomas, Regent-street ... ... ... ... ... ... | 20 | 0 | 5 |
| Waltham Abbey Parish Church ... ... ... ... ... ... | 24 | 3 | 4 |
| Mr. W. Mann Cross, C.C. ... ... ... ... ... ... | 20 | 0 | 0 |
| Trinity Church, Hampstead ... ... ... ... ... ... | 74 | 10 | 4 |
| St. Andrew, Whitehall-park, N. ... ... ... ... ... ... | 29 | 8 | 2 |
| St. Luke, Westbourne-park... ... ... ... ... ... ... | 42 | 6 | 10 |
| St. James, Hatcham ... ... ... ... ... ... ... | 75 | 9 | 3 |
| All Saints, Camberwell ... ... ... ... ... ... ... | 26 | 17 | 6 |
| Chiswick Parish Church ... ... ... ... ... ... ... | 28 | 13 | 9 |
| Christ Church, Beckenham... ... ... ... ... ... ... | 36 | 16 | 10 |
| All Saints, Hatcham ... ... ... ... ... ... ... | 21 | 2 | 5 |
| St. Alphege, Greenwich ... ... ... ... ... ... ... | 28 | 3 | 9 |
| St. Luke, Redcliffe-square ... ... ... ... ... ... ... | 51 | 6 | 5 |
| St. Mary Magdalen, Munster-square ... ... ... ... ... | 24 | 2 | 9 |
| All Saints, St. John's Wood ... ... ... ... ... ... | 21 | 12 | 6 |
| All Saints, Child's Hill ... ... ... ... ... ... ... | 21 | 14 | 9 |

# Public Health and Poor Law.

### REPORTS OF MEDICAL OFFICERS OF HEALTH.

*Birmingham Sanitary District.*—Dr. Alfred Hill is, in his twenty-fifth annual report, in no sense enthusiastic as to the sanitary progress of the city of Birmingham—that city which has ere now been held up as a pattern of municipal administration. The general death-rate is not, Dr. Hill considers, at all what it should be in relation to that of the other large towns, in spite of the fact that at one time the sanitary activity of the corporation led to a very marked diminution in the mortality. This is well shown by the following figures :—

| | Average death-rate per 1000. |
|---|---|
| Five years 1873–77 ... ... ... ... ... | 24·3 |
| ,, ,, 1878–82 ... ... ... ... ... | 21·6 |
| ,, ,, 1883–87 ... ... ... ... ... | 20·7 |
| ,, ,, 1888–92 ... ... ... ... ... | 20·0* |
| ,, ,, 1893–97 ... ... ... ... ... | 20·2* |

* Enlarged city.

In 1873 Dr. Hill was appointed medical officer of health, and it is to the sanitary progress which took place in the decade following the appointment that this reduction in the death-rate is probably in large part due. During the past fifteen years, however, despite the extension of the city boundaries, there has been no reduction in the death-rate, and Dr. Hill refuses altogether to accept the position that no further reduction can be effected. He points out in opposition to this view that if other large towns can have death-rates below 20 per 1000 he sees no reason why Birmingham should not do the same. When, for instance, the last quinquennium is compared with the preceding decennium it is found that Blackburn has reduced its death-rate 4, Huddersfield 4, Halifax 3·8, Cardiff 3·8, Oldham 3·7, Preston 3·4, and Manchester 3·3 per 1000, while Birmingham has been practically at a standstill. If the mortality of Birmingham is to be reduced, it is essential, Dr. Hill thinks, to continue the improvements which were followed by such good results after he first took office. The sewers should be thoroughly examined as to their soundness, courts and terraces should be paved, pan-privies should be done away with, and the water-carriage system of excrement disposal generally adopted; scavenging of refuse should be improved and more air-space about dwellings insisted upon. The isolation hospital accommodation of Birmingham is, too, not what it should be, and those who do not already know it will be very surprised to hear that there is no provision either for diphtheria or enteric fever. In reference to this latter disease we notice that as a matter of precaution against the specific contamination of the public water-supply Dr. Hill wrote to every medical officer of health having jurisdiction in the watersheds from which the supply is drawn requesting to be informed of any cases of enteric fever which might occur, and in addition to this it was determined to make monthly bacteriological examinations of water taken from each of the three zones of supply. Diarrhœal diseases exacted an enormous toll in Birmingham during 1897, no less than 1444 deaths having been attributed thereto. Of this number as many as 1150 occurred during the third quarter of the year, and as regards age distribution 1074 were under two years of age and 930 under one year. Into the circumstances connected with a large number of these deaths Dr. Hill has gone very carefully and he found that overcrowding and insanitary yards and privies largely obtained; in fact, his observations have led him to agree entirely with the late Dr. Ballard as to the influence of fouled soil and accumulations of excreta and refuse. There are, we are told, still 30,000 pan-privies in Birmingham, and it is easy to understand that as long as these remain in existence no great progress is likely to be made. With regard to ensuring the free dilution of polluted air among and within dwellings, a point upon which Dr. Ballard insisted so strongly, Dr. Hill advises that steps be taken to reduce the density of the buildings in the older parts of the city. He thinks that a great deal may be done by pulling down under the Housing of the Working

Classes Act such buildings as obstruct ventilation and he is inclined to advocate a general adoption of this practice as being on the whole of more use—or perhaps we should say as being more practicable—than dealing wholesale with insanitary areas. There is certainly a great deal to be said for this view.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6509 births and 3154 deaths were registered during the week ending July 9th. The annual rate of mortality in these towns, which had been 15·1 and 14·9 per 1000 in the two preceding weeks, further declined last week to 14·7. In London the rate was 14·3 per 1000, while it averaged 14·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 9·4 in Cardiff, 9·7 in Huddersfield, 10·3 in Brighton, and 10·9 in Burnley; the highest rates were 17·9 in Plymouth, 18·1 in Gateshead, 20·3 in Newcastle-upon-Tyne, and 21·4 in Sunderland. The 3154 deaths in these towns included 330 which were referred to the principal zymotic diseases, against 301 and 343 in the two preceding weeks; of these, 99 resulted from whooping-cough, 68 from diarrhœa, 67 from measles, 48 from diphtheria, 25 from scarlet fever, and 22 from "fever" (principally enteric). No fatal case of any of these diseases occurred last week in Birkenhead or in Burnley; in the other towns they caused the lowest death-rates in Brighton, Blackburn, and Preston, and the highest rates in Gateshead, Sunderland, Newcastle-upon-Tyne, and Plymouth. The greatest mortality from measles occurred in Croydon, Plymouth, and Gateshead; from scarlet fever in Gateshead; from whooping-cough in Bolton, Oldham, Salford, Sunderland, and Newcastle-upon-Tyne; and from "fever" in Swansea. The 48 deaths from diphtheria included 27 in London, 6 in Leeds, and 3 in West Ham. One fatal case of small-pox was registered in Liverpool, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment during last week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital was 2250 on Saturday last, July 9th, against 2194, 2238 and 2205 at the end of the three preceding weeks; 237 new cases were admitted during the week, against 230, 231, and 204 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 171 and 162 in the two preceding weeks, further declined to 160 last week, and were 25 below the corrected average. The causes of 42, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Bradford, Leeds, Hull, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, and Burnley.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·5 and 21·1 per 1000 in the two preceding weeks, declined again to 20·0 during the week ending July 9th, but exceeded by 5·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·3 in Leith and 14·5 in Paisley, to 25·3 in Dundee and 27·2 in Perth. The 603 deaths in these towns included 36 which were referred to measles, 27 to diarrhœa, 21 to whooping-cough, 8 to scarlet fever, 3 to diphtheria, and 1 to "fever." In all, 96 deaths resulted from these principal zymotic diseases, against 102 and 119 in the two preceding weeks. These 96 deaths were equal to an annual rate of 3·2 per 1000, which was 1·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 32 to 41 in the three preceding weeks, declined again to 36 last week, and included 16 in Dundee, 14 in Glasgow, and 4 in Paisley. The deaths referred to whooping-cough, which had been 27 and 35 in the two preceding weeks, fell to 21 last week, of which 18 occurred in Glasgow. The fatal cases of scarlet fever, which had declined from 8 to 5 in the three preceding weeks, rose again to 8 last week, and included 2 in Glasgow, 2 in Edinburgh, and 2 in Dundee. The deaths from diseases of the respiratory organs in these towns, which had been 93 and 101 in the two preceding weeks, further rose to 106 last week, and exceeded by 37 the number in the corresponding period of last year. The causes of 30, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·8 and 21·8 per 1000 in the two preceding weeks, further declined to 20·3 during the week ending July 9th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·5 per 1000, the rate during the same period being 16·4 in London and 19·7 in Edinburgh. The 136 deaths registered in Dublin during the week under notice showed a decline of 10 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 8 and 11 in the two preceding weeks; of these, 3 resulted from whooping-cough, 2 from scarlet fever, 1 from "fever," and not one either from small-pox, measles, diphtheria, or diarrhœa. These 6 deaths were equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 1·6 in London and 1·2 in Edinburgh. The fatal cases of whooping-cough, which had been 5 and 1 in the two preceding weeks, rose again to 3 last week. The 2 deaths referred to scarlet fever corresponded with the number recorded in the preceding week, while the mortality from "fever" showed a marked decline. The 136 deaths in Dublin last week included 27 of infants under one year of age and 31 of persons aged upwards of sixty years; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons showed an increase. Three inquest cases and 3 deaths from violence were registered; and 55, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 7 per cent., of the deaths in the city last week were not certified.

### VITAL STATISTICS OF LONDON DURING JUNE, 1898.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during June in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·1 per 1000 of the population, estimated at 4,504,766 persons in the middle of this year. In the three preceding months the rates had been 7·4, 7·1, and 7·2 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Westminster, St. James Westminster, St. Giles, St. Martin-in-the-Fields, Strand, City of London, and St. Saviour Southwark; while they showed the largest excess in Fulham, Hackney, Holborn, Clerkenwell, St. Luke, St. George Southwark, St. Olave Southwark, and Bermondsey. Six cases of small-pox were notified in London during June, against 3, 4, and 1 in the three preceding months; of these, 2 occurred in London City, 2 in Lee, 1 in St. George Hanover-square, and 1 in Whitechapel. Only one small-pox patient was under treatment during the month in the Metropolitan Asylum Hospitals. The prevalence of scarlet fever in London during June showed a slight decline from that recorded in the two preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Hackney, Clerkenwell, St. Luke, Mile End Old Town, St. George Southwark, and Woolwich. The Metropolitan Asylum Hospitals contained 2146 scarlet fever patients at the end of June, against 2358, 2270, and 2147 at the end of the three preceding months; the weekly admissions averaged 208, against 208, 218, and 223 in the three preceding months. The prevalence of diphtheria in London during June showed a slight further increase upon that recorded in recent months; this disease was proportionally most prevalent in Fulham, Chelsea, Hackney, Clerkenwell, St. Luke, Battersea, and Lewisham sanitary areas. There were 971 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of June, against 1009, 923, and 917 at the end of the three preceding

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JUNE, 1898.

*(Specially compiled for* THE LANCET.)

| Sanitary Areas. | Estimated population in the middle of 1898. | Notified Cases of Infectious Disease. | | | | | | | | | | Deaths from Principal Infectious Diseases. | | | | | | | | | | Deaths from all causes. | Death-rate per 1000 living. | Deaths of Infants under one year to 1000 births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small-pox. | Scarlet fever. | Diphtheria.* | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living. | Small-pox. | Measles. | Scarlet fever. | Diphtheria.† | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers. | Diarrhœa. | Total. | Annual rate per 1000 persons living. | | | |
| LONDON ... ... ... ... ... ... | 4,504,766 | 6 | 1455 | 1046 | — | 151 | 4 | 21 | 393 | — | 1076 | 7·1 | — | 283 | 57 | 127 | 221 | — | 24 | — | 89 | 861 | 1·9 | 6321 | 14·6 | 116 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington ... ... ... ... ... ... | 127,480 | — | 44 | 22 | — | 3 | — | 1 | 18 | — | 88 | 7·2 | — | 12 | — | 4 | 4 | — | — | — | — | 20 | 1·6 | 169 | 13·8 | 140 |
| Kensington ... ... ... ... ... ... | 172,174 | — | 28 | 28 | — | 7 | — | 1 | 15 | — | 87 | 5·2 | — | 8 | 1 | 4 | 8 | — | — | — | 1 | 22 | 1·3 | 229 | 14·4 | 179 |
| Hammersmith ... ... ... ... ... ... | 107,370 | — | 41 | 6 | — | 4 | — | — | 7 | — | 58 | 5·6 | — | 1 | 3 | — | 6 | — | — | — | 1 | 11 | 1·1 | 136 | 13·2 | 117 |
| Fulham ... ... ... ... ... ... | 126,275 | — | 56 | 62 | — | 3 | — | — | 6 | — | 127 | 10·6 | — | 4 | 5 | 5 | 5 | — | 1 | — | 2 | 22 | 1·8 | 151 | 12·6 | 110 |
| Chelsea ... ... ... ... ... ... | 96,713 | — | 22 | 23 | — | 2 | — | — | 11 | — | 78 | 8·4 | — | 6 | — | 8 | 4 | — | — | — | — | 17 | 1·8 | 127 | 13·7 | 70 |
| St. George Hanover-square ... ... | 80,608 | 1 | 28 | 11 | — | 2 | — | — | 8 | — | 50 | 6·5 | — | 3 | — | 2 | — | — | — | — | 2 | 7 | 0·9 | 92 | 11·8 | 116 |
| Westminster ... ... ... ... ... ... | 52,574 | — | 7 | 7 | — | 1 | — | — | 3 | — | 18 | 3·6 | — | 1 | — | — | 6 | — | — | — | 1 | 8 | 1·6 | 84 | 16·7 | 116 |
| St. James Westminster ... ... ... | 22,200 | — | 2 | 3 | — | 1 | — | — | 2 | — | 8 | 3·8 | — | 1 | — | 1 | — | — | 1 | — | — | 3 | 1·4 | 42 | 15·0 | 115 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marylebone ... ... ... ... ... ... | 140,483 | — | 37 | 21 | — | 2 | — | 2 | 20 | — | 82 | 6·1 | — | 19 | 2 | 4 | 7 | — | — | — | 3 | 35 | 2·6 | 310 | 16·3 | 107 |
| Hampstead ... ... ... ... ... ... | 78,755 | — | 24 | 21 | — | 1 | — | — | 3 | — | 49 | 6·5 | — | — | 1 | 2 | 1 | — | 1 | — | 1 | 6 | 0·8 | 72 | 9·5 | 56 |
| St. Pancras ... ... ... ... ... ... | 243,416 | — | 61 | 42 | — | 6 | — | — | 26 | — | 135 | 5·8 | — | 6 | 8 | 1 | 8 | — | 1 | — | 3 | 27 | 1·2 | 333 | 14·8 | 106 |
| Islington ... ... ... ... ... ... | 344,616 | — | 118 | 40 | — | 18 | — | 2 | 21 | — | 199 | 6·0 | — | 22 | 1 | 8 | 20 | — | 1 | — | 3 | 65 | 2·0 | 405 | 12·4 | 100 |
| Stoke Newington ... ... ... ... | 34,660 | — | 16 | 5 | — | 5 | — | — | — | — | 26 | 7·8 | — | — | — | — | — | — | — | — | — | — | — | 40 | 12·0 | 86 |
| Hackney ... ... ... ... ... ... | 219,630 | — | 112 | 78 | — | 14 | — | 2 | 17 | — | 223 | 10·6 | — | 13 | 6 | 10 | 4 | — | 2 | — | — | 35 | 1·7 | 264 | 12·8 | 79 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Giles ... ... ... ... ... ... | 37,519 | — | 3 | 5 | — | — | — | — | 5 | — | 13 | 3·6 | — | 3 | — | — | 2 | — | — | — | — | 5 | 1·4 | 64 | 17·8 | 75 |
| St. Martin-in-the-Fields ... ... | 12,424 | — | 1 | — | — | — | — | — | — | — | 1 | 0·8 | — | — | — | — | — | — | — | — | — | — | — | 13 | 10·9 | 71 |
| Strand ... ... ... ... ... ... | 23,284 | — | 4 | 2 | — | — | — | — | — | — | 6 | 2·7 | — | 2 | — | 1 | 2 | — | — | — | — | 5 | 2·2 | 55 | 34·4 | 250 |
| Holborn ... ... ... ... ... ... | 30,066 | — | 9 | 8 | — | — | — | 1 | 3 | — | 21 | 9·5 | — | 2 | — | — | 1 | — | — | — | — | 3 | 1·4 | 44 | 25·2 | 179 |
| Clerkenwell ... ... ... ... ... ... | 66,120 | — | 33 | 25 | — | 1 | — | — | 7 | — | 76 | 12·0 | — | 5 | 2 | 3 | 3 | — | — | — | 1 | 14 | 2·2 | 97 | 15·3 | 129 |
| St. Luke ... ... ... ... ... ... | 41,076 | — | 23 | 18 | — | 1 | — | — | 2 | — | 44 | 11·2 | — | 3 | 1 | — | — | — | — | — | 3 | 12 | 2·0 | 77 | 19·6 | 97 |
| City of London ... ... ... ... ... | 29,088 | — | 9 | 4 | — | — | — | — | — | — | 13 | 4·7 | — | 1 | 1 | — | — | — | 1 | — | — | 3 | 1·1 | 65 | 18·7 | 80 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch ... ... ... ... ... ... | 121,485 | — | 34 | 26 | — | 3 | — | 1 | 12 | — | 76 | 6·5 | — | 5 | 2 | 4 | 6 | — | 1 | — | 4 | 21 | 1·8 | 172 | 14·8 | 110 |
| Bethnal Green ... ... ... ... ... | 129,027 | — | 30 | 29 | — | 6 | — | — | 19 | — | 94 | 7·6 | — | 11 | — | 7 | 4 | — | 1 | — | 4 | 27 | 2·2 | 219 | 17·7 | 120 |
| Whitechapel ... ... ... ... ... ... | 80,159 | 1 | 17 | 15 | — | 2 | — | — | 12 | — | 47 | 6·1 | — | 4 | 1 | — | 4 | — | 1 | — | 1 | 11 | 1·4 | 120 | 16·8 | 88 |
| St. George-in-the-East ... ... ... | 48,241 | — | 10 | 10 | — | 2 | — | 2 | 3 | — | 27 | 5·8 | — | 7 | 1 | 2 | 1 | — | 1 | — | 7 | 19 | 4·1 | 111 | 24·0 | 120 |
| Limehouse ... ... ... ... ... ... | 58,661 | — | 19 | 11 | — | 3 | — | — | 8 | — | 41 | 7·3 | — | 4 | — | 3 | 8 | — | — | — | 6 | 21 | 3·7 | 114 | 20·3 | 173 |
| Mile End Old Town ... ... ... ... | 112,528 | — | 57 | 25 | — | 2 | — | — | 9 | — | 93 | 8·6 | — | 2 | — | 4 | 7 | — | — | — | 2 | 15 | 1·4 | 161 | 15·3 | 116 |
| Poplar ... ... ... ... ... ... | 170,220 | — | 61 | 42 | — | 8 | — | 1 | 17 | — | 129 | 7·9 | — | 5 | 2 | 8 | 5 | — | 3 | — | 7 | 20 | 1·8 | 285 | 17·5 | 156 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Saviour Southwark ... ... ... | 24,662 | — | 2 | 5 | — | — | — | — | 4 | — | 11 | 4·7 | — | — | — | 1 | 1 | — | — | — | — | 2 | 0·8 | 53 | 22·5 | 145 |
| St. George Southwark ... ... ... | 60,466 | — | 34 | 20 | — | — | — | 1 | 5 | — | 60 | 10·3 | — | 3 | 2 | 5 | 7 | — | — | — | 2 | 19 | 3·3 | 116 | 20·0 | 150 |
| Newington ... ... ... ... ... ... | 123,183 | — | 48 | 25 | — | 6 | — | 2 | 20 | — | 101 | 8·6 | — | 2 | 3 | 2 | — | — | 2 | — | 4 | 13 | 1·1 | 142 | 12·6 | 112 |
| St. Olave Southwark ... ... ... ... | 11,288 | — | 10 | — | — | — | — | — | 1 | — | 11 | 10·2 | — | — | 1 | — | 1 | — | — | — | — | 2 | 1·8 | 18 | 16·6 | 152 |
| Bermondsey ... ... ... ... ... ... | 85,738 | — | 39 | 30 | — | 2 | — | 1 | 6 | — | 78 | 9·5 | — | 9 | — | 2 | 3 | — | — | — | 4 | 18 | 2·2 | 131 | 15·9 | 168 |
| Rotherhithe ... ... ... ... ... ... | 40,849 | — | 17 | 4 | — | 1 | — | — | 5 | — | 27 | 6·9 | — | 9 | — | 1 | 1 | — | — | — | 1 | 12 | 3·1 | 67 | 17·1 | 162 |
| Lambeth ... ... ... ... ... ... | 304,073 | — | 76 | 61 | — | 9 | 4 | — | 27 | — | 176 | 6·0 | — | 8 | 5 | 5 | 19 | — | 2 | — | 9 | 46 | 1·6 | 426 | 14·4 | 114 |
| Battersea ... ... ... ... ... ... | 171,921 | — | 67 | 62 | — | 6 | — | — | 7 | — | 132 | 8·0 | — | 8 | 4 | 6 | 8 | — | — | — | 5 | 25 | 1·6 | 247 | 14·9 | 122 |
| Wandsworth ... ... ... ... ... ... | 242,526 | — | 45 | 57 | — | 8 | — | 2 | 19 | — | 131 | 6·7 | — | 15 | — | 7 | 12 | — | — | — | 6 | 50 | 2·6 | 350 | 17·9 | 122 |
| Camberwell ... ... ... ... ... ... | 261,189 | — | 76 | 68 | — | 6 | — | 1 | 17 | — | 168 | 6·7 | — | 9 | 2 | 11 | 17 | — | 4 | — | 3 | 46 | 1·8 | 316 | 12·6 | 91 |
| Greenwich ... ... ... ... ... ... | 160,441 | — | 45 | 47 | — | 8 | — | 1 | 9 | — | 110 | 6·4 | — | 23 | 2 | 1 | 21 | — | 1 | — | 1 | 49 | 2·8 | 261 | 15·1 | 110 |
| Lewisham (excluding Penge) ... ... | 88,562 | — | 19 | 29 | — | 1 | — | — | 5 | — | 54 | 6·4 | — | 4 | 1 | 2 | 1 | — | — | — | 1 | 9 | 1·1 | 98 | 11·6 | 79 |
| Woolwich ... ... ... ... ... ... | 41,478 | — | 21 | 5 | — | 2 | — | — | 6 | — | 34 | 8·6 | — | 4 | — | 1 | 8 | — | 1 | — | 1 | 15 | 3·8 | 70 | 17·6 | 222 |
| Lee ... ... ... ... ... ... | 29,717 | 2 | 17 | 9 | — | 2 | — | — | 3 | — | 33 | 8·7 | — | 1 | — | — | 2 | — | — | — | — | 3 | 0·8 | 52 | 13·7 | 76 |
| Plumstead ... ... ... ... ... ... | 62,531 | — | 23 | 6 | — | 1 | — | — | 5 | — | 35 | 5·8 | — | 22 | — | 2 | 4 | — | — | — | — | 28 | 4·7 | 97 | 16·2 | 94 |
| Port of London ... ... ... ... | — | 2 | 1 | 1 | — | 2 | — | — | — | — | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including 24 cases of membranous croup.

† Including deaths from membranous croup.

months; the weekly admissions averaged 134, against 129, 111, and 134 in the three preceding months. The prevalence of enteric fever in London showed an increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Islington, Stoke Newington, Hackney, Poplar, and Newington. The Metropolitan Asylum Hospitals contained 53 enteric fever patients at the end of June, against 64, 59, and 54 at the end of the three preceding months; the weekly admissions averaged 11, against 12 and 8 in the two preceding months. Erysipelas was proportionally most prevalent in Paddington, Marylebone, Bethnal Green, Newington, and Woolwich sanitary areas. The 21 cases of puerperal fever notified in London during June considerably exceeded the number recorded in the preceding month, and included 2 each in Marylebone, Islington, Hackney, St. George-in-the-East, Newington, and Wandsworth sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, July 2nd, the deaths of 6321 persons belonging to London were registered, equal to an annual rate of 14·6 per 1000, against 20·8, 18·1, and 15·7 in the three preceding months. The lowest death-rates in the various sanitary areas were 9·5 in Hampstead, 10·9 in St. Martin-in-the-Fields, 11·5 in Lewisham, 11·9 in St. George Hanover-square, 12·0 in Stoke Newington, and 12·4 in Islington; the highest rates were 20·0 in St. George Southwark, 20·3 in Limehouse, 22·5 in St. Saviour Southwark, 24·0 in St. George-in-the-East, 24·6 in Strand, and 25·2 in Holborn. During the five weeks of June 801 deaths were referred to the principal zymotic diseases in London; of these, 283 resulted from measles, 57 from scarlet fever, 127 from diphtheria, 221 from whooping-cough, 24 from enteric fever, 89 from diarrhœa, and not one either from small-pox, typhus, or any ill-defined form of continued fever. These 801 deaths were equal to an annual rate of 1·9 per 1000; no fatal case of any of these diseases was registered during the month under notice either in Stoke Newington or in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, Hampstead, St. Saviour Southwark, and Lee; and the highest rates in St. Luke, St. George-in-the-East, Limehouse, St. George Southwark, Rotherhithe, Woolwich, and Plumstead. The 283 fatal cases of measles were 56 below the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Marylebone, St. Luke, St. George-in-the-East, Rotherhithe, Wandsworth, Greenwich, and Plumstead sanitary areas. The 57 deaths from scarlet-fever were 31 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 127 fatal cases of diphtheria were 52 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Hackney, Clerkenwell, Bethnal Green, Limehouse, Poplar, and St. George Southwark. The 221 deaths referred to whooping-cough slightly exceeded the corrected average number; the mortality from this disease was highest in Westminster, Strand, Limehouse, St. George Southwark, Greenwich, and Woolwich sanitary areas. The 24 fatal cases of enteric fever were 21 below the corrected average number; the mortality from this disease last month showed no marked excess in any of the sanitary areas. The 89 deaths referred to diarrhœa were less than half the corrected average. In conclusion, it may be stated that the aggregate mortality last month from these principal zymotic diseases was nearly 21 per cent. below the average, the deaths from each of the diseases, except whooping-cough, being below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was last month equal to 116 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Chelsea, Hampstead, Hackney, St. Giles, St. Martin-in-the-Fields, Lewisham, and Lee; and the highest rates in Kensington, St. George Hanover-square, Strand, Holborn, St. George-in-the-East, St. Olave Southwark, and Woolwich.

† Including deaths from membranous croup.

* Including 24 cases of membranous croup.

# THE SERVICES.

## NAVAL MEDICAL SERVICE.

THE following appointments of Surgeons are announced:—William R. Trythall to the *Daphne;* G. McGregor to the *Mosquito;* R. S. Bernard to the *Vernon;* William H. Pope to the *Renard;* Henry W. Finlayson to the *Victory,* Archibald W. Campbell to the *Alarm;* George E. Macleod to the *Gossamer;* and Godfrey Taylor to the *Leda.*

## ROYAL ARMY MEDICAL CORPS.

Captain J. C. Jameson has proceeded to the Royal Arsenal, Woolwich, for duty. Major E. M. Wilson has been selected for service in Egypt. Captain Cummins has been ordered to the Home District for duty. Lieutenant-Colonel B. W. Large has been placed under orders to embark for Egypt. The following officers have been appointed to medical charge of troops as stated: Major W. J. Naismith, A.M.R., 3rd Battalion Royal Scots Fusiliers, at Ayr; Captain W. B. Macdonald, A.M.R., South-East of Scotland Artillery, at Dunbar. The annual gymkhana of the detachment at Gibraltar was held at North Front on June 20th and was a complete success. Lieutenant-Colonel Gunning and many well-known officers were present, whilst the general attendance greatly exceeded that of any previous gathering. Captain J. Thomson has embarked for service in Egypt. Two detachments have recently started from Aldershot for the Soudan. The first left on July 1st and consisted of Major Dodd, in command, Captain Clarkson, Lieutenant Lowsley, and 119 non-commissioned officers and men. The second left on July 13th and consisted of 133 non-commissioned officers and men, under Lieutenant-Colonel Clery, with Lieutenant-Colonel Carey and Lieutenant and Quartermaster Goater. Major W. G. Birrell and Major F. W. C. Jones and Lieutenant E. Brodribb have embarked for service in Egypt. Lieutenant-Colonel G. A. Hughes handed over the medical charge of the Station Hospital, Canterbury, to Major H. J. Barratt on July 1st.

## INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain Bourke have been placed at the disposal of the Government of Bombay as Officiating Chemical Analyser. The services of Surgeon-Captain Heard are replaced at the disposal of the Military Department. The services of Surgeon-Captain Burnett are placed at the disposal of the Government of Bombay. The services of Surgeon-Captain Buchanan are placed at the disposal of the Government of Bengal for gaol duty. Surgeon-Lieutenant-Colonel Cook and Surgeon-Captain Donovan are appointed to act as Surgeons, fourth district, Madras. Surgeon-Captain Mitter is appointed to act as District Medical and Sanitary Officer, Ganjam, and Superintendent of Gaol, Berhampore, during the employment of Surgeon-Captain Pereira on other duty. Surgeon-Lieutenant-Colonel Duncan (Army) is appointed to the Civil Medical Charge of the Almora District in addition to his military duties. Surgeon-Captain Vost, Civil Surgeon, Gonda, is appointed to hold Visiting Medical Charge of the Bahraich District in addition to his other duties. Surgeon-Major O'Sullivan (Army) is appointed to the Civil Medical Charge of Roorkee in addition to his military duties. Surgeon-Major MacLaren, Civil Sugeon, Benares, is appointed to hold Visiting Medical Charge of the Jaunpur District in addition to his other duties. The services of Surgeon-Captain Deare and Surgeon-Captain Oldham are replaced at the disposal of the Government of Bengal. The services of Surgeon-Captain Gwyther are placed at the disposal of the Government of Bengal for employment on plague duty. The services of Surgeon-Lieutenant Clemesha are placed at the disposal of the Government of the Punjab for employment on plague duty. The services of Surgeon-Captain Dewes and Surgeon-Captain Prasad are replaced at the disposal of the Government of Burmah. The services of Surgeon-Captain Dallas are replaced at the disposal of the Chief Commissioner of the Central Provinces. Surgeon-Major Shore (Bengal) is appointed to be Residency Surgeon in Newar. Surgeon-Major Woolbert is appointed to officiate as Medical Officer, Kotah and Jhalrapatan. Brigade-Surgeon-Lieutenant-Colonel Hall (Bengal) is granted the temporary rank of Surgeon-Colonel whilst officiating as Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, vice Surgeon-Colonel Warburton, on leave. Surgeon-Captain Jordan is appointed to act as Deputy Sanitary

Commissioner, Metropolitan and Eastern Bengal Circle, and to be an Assistant Health Officer of the Port of Calcutta in addition to his own duties. Surgeon-Captain Vaughan is reappointed to be Deputy Sanitary Commissioner, Western Bengal Circle, and is also placed on special duty in connexion with anti-cholera inoculation. Surgeon-Captain Calvert is appointed to act as Civil Surgeon of Darbhanga during the absence on deputation of Surgeon-Captain Green. Surgeon-Captain Birdwood, Officiating Civil Surgeon, Ghazipur, is appointed to hold Visiting Medical Charge of the Ballia District in addition to his other duties. Surgeon-Lieutenant Stevenson is transferred from plague duty at Hardwar to platform inspection duty, Saharanpur. Surgeon-Lieutenant-Colonel Maitland has been appointed Senior Physician of the Madras General Hospital. Numerous cases of enteric fever, supposed to have been contracted on the march up from the plains, have occurred among the troops at Dalhousie.

### MILITIA MEDICAL STAFF CORPS.

The Hants Companies of the Militia Medical Staff Corps arrived at the Royal Victoria Hospital, Netley, on July 4th for their annual training. They are to remain at Netley twenty-seven days and are under the command of Captain W. M. O'Connor, M.D. Dub.; Captain H. E. Mortes is also on duty with his company. The strength consists of 46 privates and 11 non-commissioned officers. The companies are on duty daily at the Royal Victoria Hospital and parades are held daily for company and stretcher drill.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel A. T. Norton, C.B., having resigned his appointment in the Volunteer Medical Staff Corps and Surgeon-Captain R. Bevan, having resigned his Volunteer appointment, cease to belong to the Army Medical Reserve of Officers.

### VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Ernest Blechynden Waggett, M.B. Cantab., appointed to be Surgeon-Lieutenant.

### THE SPANISH-AMERICAN WAR.

The events which have taken place since our report of last week, in which the complete destruction of Admiral Cervera's fleet and the unsuccessful attack of General Shafter's force on Santiago were referred to, have been followed by some detailed information concerning these occurrences. The information is still very incomplete, however, but the fact remains that there is an end to the naval power of Spain as far as this war is concerned. Admiral Camara's fleet remains, no doubt, but Spain has seemingly very little to hope for in that direction. It is now on its way back to Spain from Suez for the protection of Spanish seaports, but the United States are despatching Commodore Watson's squadron to meet it. Nothing has been more surprising than the collapse of the Spanish navy and the tactical mistakes and apparent incapacity of all concerned in regard to it. General Shafter has been strongly reinforced, and with the artillery and the number of men now at his command, Santiago, which is closely invested, is bound to be taken unless surrendered. The troops composing General Shafter's force showed great dash and bravery in their late engagement before Santiago, but the expedition was altogether premature and from a military point of view a mistake. Without a strong force of artillery the task of driving the Spanish troops out of their entrenchments could not be successfully undertaken. The total loss to the attacking force was heavy: it amounted to 1593, of whom 300 were killed, including 22 officers. No returns have been published of the Spanish losses on that occasion. There does not seem to be much sickness so far among the American troops in Cuba, but they have undergone much exposure and hardship in addition to their losses in fighting. There were about 150 cases of fever in hospital. As is almost invariably found to be the case in such expeditions as that which the United States troops have undertaken in Cuba, the great difficulty is one of transport. From the published reports it would appear that owing to this cause the field hospital and commissariat arrangements have been attended with extreme difficulties and have exhibited many shortcomings. The unpreparedness on the part of both belligerents is one of the remarkable features of the war. Spain was, it is true, exhausted when she began it by the enormous losses she had already sustained in her ineffectual attempts to stamp out the insurrection in Cuba. Still, she had a large army in occupation of that island and a fleet which, if not of equal strength to that of her adversary, was capable, with skilful management, of doing a great amount of damage and mischief in various ways. Nothing, however, is to be learned from the action of her fleet for it is not likely that any other nation would adopt and follow her futile tactics. The Americans, on the other hand, have been audacious and enterprising and surprisingly successful at sea, but far less so on shore, and the Spaniards, if they are still determined upon fighting it out, may give the United States Government an infinity of trouble, although the end is absolutely certain to be in favour of the latter. It seems highly probable that Spain will soon be compelled to come to terms with her adversary.

### THE SICK AND WOUNDED IN EGYPT.

Major-General Frank S. Russell's communication to the *Times* of July 11th on the above subject deals in a judicious and temperate spirit with the real and alleged shortcomings at the battle of Atbara and with the provision which should be made to meet the medical and transport requirements of the Anglo-Egyptian force in the forthcoming expedition to Khartoum. We have reason to hope that whatever is practicable in these respects will be done—as should certainly be the case—when the advance during next month takes place. Efficiency and not economy merely is the first aim in war.

### INDIAN FRONTIER CAMPAIGN.

A gratuity will be granted to all officers and men employed in the recent operations on the North-Western Frontier. It will be at the rate of 24 rupees per share for the British and 12 rupees for native soldiers. A general will receive 400 shares; a colonel on the staff and a surgeon-colonel, 40 shares; a colonel, lieutenant-colonel, brigade-surgeon-lieutenant-colonel, and surgeon-lieutenant-colonel, 32 shares; a major and a surgeon-major, 16 shares; a captain and a surgeon-captain, 12 shares.

### MEDICAL CHARGE ALLOWANCE.

We learn from the *Pioneer Mail* of June 24th last that it has been decided that Indian medical officers shall in future receive an allowance of Rs. 100 a month for the medical charge of each section of a field hospital in lieu of consolidated salaries for medical charge of such hospital as a whole, but the allowances to Army medical officers for the charge of field hospitals and to officers of both services for charge of general hospitals shall remain unchanged.

### LEAN'S ROYAL NAVY LIST.

The July number of this valuable work of reference has now appeared and requires no recommendation to those who are aware of the extensive and varied information which it uniformly contains. The publishers are Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill.

### ARMY MEDICAL SCHOOL, NETLEY.

The seventy-sixth or Summer Session of the Army Medical School, Netley, will be brought to a close on July 29th, when the prizes will be distributed and an address delivered by Lord Lister. The Netley examination will commence on July 21st and will terminate on July 27th.

Dr. Samuel O. L. Potter, M.D. Jefferson Med. Coll., Philadelphia, M.R.C.P. Lond., of San Francisco, has been commissioned as a Brigade-Surgeon of Volunteers with the rank of Major in the United States Army and assigned to the expeditionary forces to the Philippine Islands.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on July 12th, Inspector-General W. H. Lloyd being in the chair, the sum of £66 was distributed among the several applicants.

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PROPOSED APPOINTMENT OF A MEDICAL OFFICER OF HEALTH.—At the meeting of the Somerset County Council held on June 28th the committee appointed to consider the question recommended that the Council should appoint a county medical officer of health who should devote his whole time to the duties at a salary of £500 per annum exclusive of travelling allowances. The consideration of the subject was deferred to the October meeting.

# Correspondence.

"Audi alteram partem."

## "VITALITY."

*To the Editors of* THE LANCET.

SIRS,—I have read Dr. Lionel Beale's "Appeal and Challenge" in an entirely unprejudiced spirit, but the former does not convince my understanding and I am therefore reluctantly compelled to take up the gauntlet he has thrown down to his brother practitioners.

It seems to me more logical and more easy of comprehension to regard *vitality* as a peculiar play of forces belonging to the inanimate world than as a force *per se* essentially different in nature from these forces. On the former assumption vitality is due to the working of forces inherent in the elements of bioplasm and of those environmental forces which share in the reaction between the bioplasm and its environment. If vitality is distinct from these forces it must exist apart from matter and if such is the case how and where, I would ask, does it exist? Dr. Beale would seem to argue that it is a sort of intelligence existing apart from matter, capable of directing the operation of the forces belonging to matter—a position as untenable as that of the spiritualists, who assume that the immaterial can act upon the material.

Dr. Beale will, I presume, allow that the quantity of vitality in an organism tends to vary with its bulk. Other things equal, the quantity of vitality in an organism containing a million cells is a million times greater than that of a one-celled organism. The human organism starts practically as a single cell, but by the process of segmentation it develops into one consisting of millions of cells, and when this has happened the sum of its vitality is many million times greater than that of the primitive embryo. Now whence has come this augmentation of vitality? Force, like matter, cannot be created any more than it can be annihilated. The answer surely is that it comes in the last resort from the nutrient fluids, oxygen, &c., conveyed from the world without. It is carried into the house by the milkman, grocer, butcher, and is borne in by the atmosphere.

I cannot think of vitality as a force *per se*. I conceive that the behaviour of bioplasm is essentially the outcome of physical conditions—that it depends upon the nature and arrangement of the atoms in the bioplasmic molecules, upon the arrangement of the molecules among themselves—upon the structure of the bioplasm in fact—and other purely physical conditions. Dr. Beale's assumption that bioplasm is structureless is to my mind wholly illogical. He assumes it to be so because he is unable to detect any structure in it. In our journey into the world of the infinitesimal we come sooner or later to a point at which we cease to detect structure, but this point is a purely arbitrary one and is continually receding as our means of investigation improve. It marks the limit of our perceptions aided by the most powerful microscopes we can devise, but bears no relation whatever to any grand fact of nature. To my mind bioplasm is highly complex in structure as compared with inorganic matter. We are so apt to forget that the world of the infinitesimal is as unlimited as that of the immense. If we take a single cell as our unit of size, then as regards its relation to space it is no nearer the limit of the infinitely small than of the infinitely great, for neither has any limit; our cell may be divided or multiplied *ad infinitum*. Imbued with this conception we shall the better realise the vastness of the infinitesimal, so to speak, and shall be cautious in regarding bioplasm as altogether devoid of structure.

One further point. On Dr. Beale's view it is most difficult to account for the evolution of life on this planet. If vitality is not correlated with the forces of inanimate nature whence came it? On the assumption that it is a peculiar play or coördination of physical forces, the evolution of life, the coming-into-being of vitality, is to be explained by the coming together of certain atoms in a peculiar way. For my part I believe in the spontaneous evolution of life. The fact that those forms of life which we regard as the most primitive cannot evolve from inanimate matter is no argument against this belief. A proper appreciation of the vastness of the infinitesimal prepares us for the conclusion that the most primitive forms of life known to us are highly complex as compared with those which are actually the most primitive. Such I should expect to consist of a comparatively few molecules and to be altogether too minute for detection by the most powerful microscope.

I am, Sirs, yours faithfully,

Wimpole-street, W., June 26th, 1898. HARRY CAMPBELL.

## PENALTIES FOR UNREGISTERED PRACTICE.

*To the Editors of* THE LANCET.

SIRS,—In view of the general interest, public as well as professional, aroused by the Collins case, the time seems favourable, in spite of the lateness of the session, for an attempt to penalise disregistered practitioners, to the extent of disqualifying them from further practice. As the case stands Dr. Collins retains his degree, in spite of a double conviction for felony and a sentence of penal servitude, and signs are not wanting that other cases of the same kind may speedily transpire. In view of these facts the council of the Incorporated Association of Medical Practitioners has determined to seek an interview with the Home Secretary at once, with the view of inducing him to bring in a Bill on the lines of the one which I enclose.

We recognise fully that the time available is very short, but there can be little doubt that if the profession will bestir itself the object may be effected. Every day is, however, of consequence, and we earnestly appeal to every practitioner who has the dignity of the profession and the safety of the public at heart to communicate with his Parliamentary representative at once to secure his support for the proposal. There is no doubt that the action of the Home Secretary will be greatly influenced by the prospects of the measure as regards opposition, and time is of the last importance. I shall be most happy to supply a copy of the proposed measure to any member of the profession who may apply to me for one enclosing a halfpenny stamp, and shall be glad to hear from any who would be willing to join with me in impressing its importance upon our legislators.

I am, Sirs, yours faithfully,

EDWD. C. BOUSFIELD.

363, Old Kent-road, S.E., July 11th, 1898.

[ENCLOSURE.]

**AN ACT to prevent persons who have been removed from the Medical Register under the provisions of Section XXIX. of the Medical Act, 1858, from continuing to act as Medical Practitioners.**

**WHEREAS it is expedient that persons who have been removed from the Medical Register by the General Council of Medical Education and Registration under the powers conferred upon it by the twenty-ninth Section of the Medical Act, 1858, should be prevented from continuing to act or practise as Medical Practitioners: Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the Advice and Consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the Authority of the same, as follows:—**

**1. This Act may for all purposes be cited as "The General Medical Council (additional Powers) Act."**

**2. This Act shall commence and take effect from the First Day of September, One thousand eight hundred and ninety-eight.**

**3. Any person whose Name shall have been removed from the Medical Register by the General Council of Medical Education and Registration, under the powers conferred upon the said Council by the twenty-ninth Section of the Medical Act, and who shall thereafter practise Medicine or Surgery, or Medicine and Surgery, as the case may be, in any part of the United Kingdom of Great Britian and Ireland, shall, upon a summary Conviction for any such Offence, pay to the said Council a Sum not exceeding Twenty Pounds.**

**4. The General Council of Medical Education and Registration shall be entitled to receive all Fines inflicted upon Offenders convicted under Section XL. of the Medical Act.**

## MYDRIN: A NEW MYDRIATIC.

*To the Editors of* THE LANCET.

SIRS,—THE LANCET of July 2nd contains an interesting note by Dr. Sydney Stephenson on a New Mydriatic. He kindly alludes to my observations on this mydriatic in the *Clinical Journal* in 1895, which were, I think, the first published in this country. I would like to add that I again refer to the value of mydrin in my volume on the "Examination of the Eye" (Pentland), published this year. My object in writing now is to reiterate my opinion of the efficacy of mydrin as a rapid pupil dilator without affecting the accommodation and the effects of which quickly pass off, features marking it as specially adapted for producing mydriasis for ophthalmoscopic purposes. The present price of the drug is, however, almost prohibitive of its use. I

understand that it still costs something like 25*s.* a drachm, but of course a demand for it would soon bring about a reduction in price. It is further to be desired that some firm should furnish the drug in the form of gelatin discs of such excellence, for instance, as Wyeth's discs of homatropine.

I am, Sirs, yours faithfully,

July 13th, 1898. SIMEON SNELL.

## COPYRIGHT IN PRESCRIPTIONS.

*To the Editors of* THE LANCET.

SIRS,—Now that the Royal Commission on Copyright is sitting would it not be a good plan to devise a scheme for bringing prescriptions under the law of copyright? I mean that it should become legal for medical men to retain the copyright in their prescriptions after a certain limited time after their issue. It is very common for patients to have some prescription which suits them renewed perhaps hundreds of times even to the end of their lives, so that the authors of the prescriptions get compensated with absurd insufficiency by the single fee they receive. The injustice of the present state of things is so palpable and our loss so enormous thereby that there can be no object in disguising the sordid nature of the proposal. It is quite possible that the injury done to us might be obviated in some such way as I suggest.—I am, Sirs, yours faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P. Lond.

Elizabeth-street, S.W., July 12th, 1898.

## HOSPITAL REFORM.

*To the Editors of* THE LANCET.

SIRS,—In the paper I read recently at the United Service Institution embodying certain suggestions as to the reform of the casualty and out-patient departments of London hospitals I made a statement which I have since discovered is not warranted by fact: it was to the effect that in Scotland and in Ireland drugs were not given in the medical out-patient departments of the hospitals. Before I left the Institution I was informed that I was mistaken with regard to Ireland and Mr. Garrett Horder writes to me under date July 6th as follows: "I have been making inquiries of the system adopted in the principal Scotch hospitals and I find that as a rule medicines are supplied to the out-patients."

I regret having made the assertion, but I regret still more that the fact is not as I supposed, as I believe the plan to be a good one.—I am, Sirs, yours faithfully,

W. HENRY KESTEVEN.

Hendon, N.W., July 8th, 1898.

## "BLOOD-PRESSURE IN THE INSANE."

*To the Editors of* THE LANCET.

SIRS,—The article on the above subject from the pen of Dr. Maurice Craig, which appears in THE LANCET of June 25th, is of such importance that I venture to offer some observations which are based upon five months' constant use of Barnard and Hill's sphygmometer, which has been brought into requisition to such good purpose by Dr. Craig, with reference to those who are relatively sound in mind. Dr. Craig is careful to point out that although high intra-arterial pressure is uniformly found to exist in cases marked by depression, especially in melancholia, and infra-normal blood-pressure in those who exhibit excitement and mania, he does not for one moment believe that "any amount of altered blood-pressure can *per se* produce insanity in a perfectly stable person," and suggests that "similar conditions of blood-pressure may exist in other individuals without inducing, or being associated with, mental alienation." In that view he is perfectly correct. Indeed, as far as my experience goes, not only is such the case, but in many persons a pressure of 200 and more mm. Hg. may exist without any psychic effect other than such depression of spirits and gloominess of anticipation as are constantly met with in people who pass as being in average health or as being affected with nothing more grave than the mental state commonly associated with gouty conditions.

Writing on the subject of chronic diseases of the heart in 1895[1] I stated that "intolerance of sound, irritability, difficulty of mental concentration, lessened power of work, depression amounting in some cases to despondency, and night alarm are of common occurrence," and that with rehabilitation of the heart and vessels "all such nerve suffering vanishes like a dream and the spirits rise to a plane of hope and energy." With the aid of the sphygmometer I have been able to verify the fact that depression, the indefinable sense of impending disaster, irritability, and insomnia are generally associated with high blood-pressure and have observed that the lowering of that pressure is followed by very satisfactory results. The instrument referred to indicates the line of treatment which may be required. Of cases of mental excitement associated with infra-normal pressure I have seen so little that I do not venture to express an opinion. There is, however, one point in Dr. Craig's article which, if I may venture so to say, requires further and closer examination, and that is the state of the bowels. He attaches much importance, and doubtless in the main rightly, to the relief of constipation and to the maintenance of somewhat free action of the bowels; but it must not be overlooked that a considerable proportion of the subjects of mental depression with high blood-pressure suffer from chronic intestinal catarrh, involving from two to three actions of the bowels a day, of which only the first may be formed or fragmentary and the others fluid. With regard to the relation of the state of the bowels to the condition under consideration, it is suggested that the depression may be due to sensory nerve stimulation affecting the general arterial pressure through the splanchnic mechanism rather than to self-infection. If such be the case the existence of fæcal accumulation and of inordinate action of the bowels must both be regarded as having a similar disturbing effect on the sensory nerves in question, and I do not deny that such may be the case. On the other hand, I do think that the question of auto-toxication cannot be excluded, the more so as, whether the condition relieved be fæcal accumulation or chronic intestinal irritation, an important point is gained in the lowering of blood-pressure and at the same time a striking change is exhibited in the renal function by the great increase of the excretion of urine and the diminution of its toxicity. The question, therefore, arises: What may be the clinical and therapeutic import of the association between mental depression and high blood-pressure? The observations of some years, which have been strongly confirmed since I have brought the sphygmometer into general use, show that those conditions of the blood which are betrayed by scantiness or concentration of the urine and by increased toxicity are themselves the causes of contraction of arterioles, of high intra-arterial pressure with increase of peripheral resistance, of venous engorgement, and of deficient oxygenation of the blood, and that all these conditions, which together constitute a serious pathological condition, are rapidly relieved by increase of arterial capacity and the relief of peripheral resistance resulting in improved oxidation and metabolism and the repair, among others, of the cerebral and other nerve tissues. It is a matter of observation that fæcal impaction and chronic looseness may both be associated with high intra-arterial pressure; and there are strong clinical grounds for believing that the presence of imperfectly digested substances in the descending colon is causatively connected with re-sorption of toxins which should be excreted and with blood-contamination with products of fermentive decomposition. For these reasons I think that auto-toxication is an important factor in the production of mental depression.

In illustration I give, from many others, the following cases. On May 26th I saw a woman, aged thirty-seven years. Her radial pulse was thready and the pressure was 160 mm. Hg. The apex was 1 in. outside the nipple line. There was dyspnœa on the levels and inclines. She woke with a sense of impending suffocation associated with pain in the præcordium and the inner aspect of the left upper arm. The bowels acted twice or thrice daily; the motions were yellow, the second and third being liquid. The patient was very depressed and unwilling to submit to treatment, as she said that she could never be better; she was never without headache, extending from the frontal region to the vertex and occiput. On June 1st the pressure was 126 mm. Hg., she had scarcely any headache, she felt and looked better, and was more hopeful. On the 7th there was no headache, the appetite and spirits were good, the apex was in the nipple line, the bowels acted once daily, and the motions were healthy. When last seen, on June 30th, she was very bright and cheerful; she had no headache and slept well; the bowels were regular; there

[1] The Schott Treatment of Chronic Diseases of the Heart.

was no recurrence of anginous pain, and the pressure was from 122 to 124. The second patient was seen on May 14th. She was a woman aged thirty-one years. Pressure was 156 mm. Hg.; exertion brought on præcordial pain extending to the inner aspect of the left forearm; the apex was a quarter of an inch outside the nipple line; the second sound at the base was accentuated in both areas; the bowels acted once daily, the motions being always liquid and brown; she had general rheumatic pains and refused to eat and to speak; she cried frequently and was generally very depressed. She had headache at the vertex on waking every morning. On June 28th the pressure was 122; the patient was very cheerful and in good health; there was no anginous pain; the apex was half an inch within the nipple line; the heart sounds were normal; the motions were healthily formed; and there was no headache.

In both these cases remedies were given to retard the action of the bowels and to promote intestinal antisepsis, in conjunction with small doses of iodide of potassium and 3 gr. daily of nitrite of sodium. The first patient, in addition, had some artificially prepared Nauheim baths. I may add that prior to reading Dr. Craig's article I had suffered for two months from headache at the vertex, coming on daily at about 6 A.M. and subsiding after my morning bath. On taking my pressure at bedtime I found it to be 170 mm. Hg. I took 2 gr. of nitrite of sodium and woke the following morning with a clear head. After breakfast the pressure was 122 mm. Hg. The two following nights I took no nitrite with the result that I had headache in the mornings. Since then I have taken 1 gr. each night with good results. At the present moment (midnight), 24 hours since taking the last dose, the pulse pressure is 130 mm. Hg.

I am, Sirs, yours faithfully,

**Upper Brook-street, W., July 4th, 1898.** W. BEZLY THORNE.

## "THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS."

*To the Editors of* THE LANCET.

SIRS,—If "Practitioner's" ex-employer was making only £700 a year and yet had more work "than one man could possibly do," one cannot help thinking that his fees must have been a good deal below the ordinary standard. And I cannot understand how a man should have to work "practically night and day" to earn £400 a year unless under similar circumstances. My own income is just about that figure, but though I walk my rounds and do everything myself I cannot complain of want of leisure. When men find that it is impossible to get an assistant unless they pay him sufficient to give him a moderately respectable return upon his invested capital of money, brains, and hard work, they will begin to find, too, that branch practices, sixpenny fees, and penny clubs are as unremunerative as they are selfish and undignified. The result will be that everybody will have the chance of making a modest but sufficient income. The recent action of the General Medical Council seems (if the jeremiads which some of your correspondents are pouring into our ears be not exaggerated) likely to bring about this result. It is a consummation devoutly to be wished.

I am, Sirs, yours faithfully,

**July 10th, 1898.** PRACTITIONER TOO.

*To the Editors of* THE LANCET.

SIRS,—"Practitioner" gives another, but hardly the reverse, side of the picture. No one questions that there are thousands of practitioners for whom a young man may act as assistant with the greatest satisfaction and mental profit. But that is hardly the point in question. The practical point is the obvious injustice of a man, such as "Practitioner" himself, spending some seven or eight years in study and probably about £1000 to learn his profession, and then only receiving a small pittance which can leave him no margin to save. If he serves with a definite understanding that he will receive a share of the practice in time the matter is not altogether objectionable, but a very large majority of assistants have no such understanding, but give their services simply for cash and because they have not the wherewithal to buy themselves a practice. The public squeezes the principal and the principal the assistant, and so things will go on until the profession is so flat that it can be squeezed no more, and then perhaps it will begin to resist the pressure. One would like to know how much the parish and the clubs were paying "Practitioner's" hard-used principal. I have little doubt that it was Poor-law work done at a loss and club work at some ridiculous price which compelled the unfortunate man to so squeeze his assistant. If there is now a dearth of qualified assistants the principals will have to bear the pressure themselves and I hope they will soon begin to resist. It is only the threat of advertising for another medical man which keeps many of the Poor-law medical officers from demanding a reasonable wage, and if they could be assured that there was no longer a cloud of aspirants hovering over them ready to pounce on the smallest appointment they would begin to resist the ever-increasing pressure. The effect would soon be felt all round and "Practitioner's" description of the profession as a life of hardship, a scanty income, constant harass, and too often but little gratitude, accurate enough now, would soon cease to be true.

I am curious to learn what fee, if any, will be paid the medical officers who are to call on the unvaccinated infants with offers of gratuitous glycerinated lymph. This would seem a good opportunity for them to ask a reasonable fee and one which would at least cover their travelling expenses. Probably they will be asked to do it for nothing on the ground that it will be a splendid advertisement. "Practitioner" has my hearty sympathy if he has to do the work of two men to earn a net income of £200 a year, but let me urge him not to attempt to lessen the pressure by placing part of it on a younger man, but rather take the manlier course of demanding a fair wage from those who use his services. I know it is folly for a man to quarrel with his bread-and-butter, but it is passing strange that the coal-miner will leave his work and starve rather than take a penny less than what he believes is his due, while the hard-worked practitioner dare hardly hint at the request for a slight increase in his starvation wages. With apologies for such a lengthy letter,

I am, Sirs, yours faithfully,

**July 9th, 1898.** ANOTHER G.P.

*To the Editors of* THE LANCET.

SIRS,—I think there is little doubt that the average income of medical men, especially those living in country parts, does not exceed £400 a year. The contrast between this amount earned in large towns and in the country is very considerable, as in the former case this income can be obtained on foot or with occasional hiring, whereas in the country it means the necessity of keeping two horses, which, with their necessary expenses of groom, &c., reduces the income by quite a third. In addition to this, in many of the country parts lack of educational facilities necessitates a man with a family sending his children to boarding schools instead of day schools, by which the expense is greatly increased. I speak from experience and say were I not fortunate enough to have some private means I am unable to see how I could have educated my family, as it is with great difficulty I have given them a fair general education at a cost of about £1500, but cannot afford to bring them up to a profession, consequently my two sons have gone abroad. At the commencement of my career I was an assistant for several years at £60 a year in-door and was treated as a gentleman except in one instance. My opinion is that from £60 to £80 a year in-doors ought to be fair remuneration for an assistant, as it does not differ much from what the average practitioner really gets, as board and lodging with proper treatment ought to represent £100 per annum. I think a fair estimate of a country practitioner's expenses would be: horses, grooms, and drugs, £180; rent, rates, and taxes, £60; leaving £160 for household and other expenses.

I am, Sirs, yours faithfully,

**July 11th, 1898.** MEDICUS.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Plague in Bombay, Calcutta, and Karachi.—Degrees of Virulence during an Epidemic.—Medical Men and Nurses on Plague Duty.*

IN Bombay the general health of the population has greatly improved. A few cases of plague still continue to be reported, which must remind the authorities that this

disease has not yet been exterminated from the city. An increased number of cases of relapsing fever have occurred, but the mortality from this disease is small. In Calcutta the plague seems to be very gradually increasing. It will be remembered that a very gradual development characterised the first outbreak in Bombay. The totals now stand at 104 cases and 77 deaths—a mortality of 74 per cent. Inoculation with Haffkine's prophylactic fluid is becoming more popular, the total number inoculated up to June 9th being 1239. Large numbers of the people continue to leave the city and judging by the favourable results of clearing out large sections of a population and putting them in health-camps the greatest safety after all probably lies in flight. It is interesting to note the rise in virulence of the plague as an epidemic advances. In Karachi the present outbreak commenced at the end of March. For the first week in April the mortality of plague cases was 55·5 per cent., for the second week 63·3 per cent., for the third week 74·6 per cent., for the fourth week 66·7 per cent., for the fifth week 77·9 per cent., for the sixth week 79·8 per cent., and for the seventh week 89·8 per cent. This fearful mortality occurred just after the highest plague figures had been recorded. From this time, however, the epidemic rapidly declined. For the eighth week the mortality of plague cases sinks to 77·5 per cent., which it also maintains for the ninth week, and for the tenth week it sinks to 73·7 per cent. The epidemic has been shorter in duration but more severe in character than the outbreak last year. The numbers show that compared with the population it has been twice as deadly as even the second outbreak in Bombay. The later season and the exodus of people probably account for its shorter duration. The mortality of this outbreak has been 87·4 per cent.; last year it was 81 per cent.

Considering the various dangers which the English medical men and nurses engaged in attendance on plague cases have incurred not only from plague and other diseases but in very many instances from physical injury, it would be justly a reward of merit if the Government of India were to recognise their services by some mark of distinction. The duties of both medical men and nurses have been arduous and for the most part uninteresting: the climate is trying for new-comers and the pay is not only considerably lower than their position warrants but is inadequate to the services rendered. Should plague develop as the colder weather advances, and should the Government of India require further assistance, I strongly advise both medical men and nurses not to come to India at the present rates of pay. Expenses are heavy, it is only a temporary appointment, there is no prospect after the plague is over, inconveniences are numerous, and you are perhaps isolated from all your friends.

**June 16th.**

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

### *The Mayor of Bootle.*

DR. JOHN MCMURRAY, the popular mayor of Bootle, will be formally presented at an early date with his portrait reproduced in oils. A short time ago a number of representative gentlemen in Liverpool organised a subscription for the purpose. The painting has been executed by Mr. C. J. Orchardson and is to be exhibited in the Walker Art Gallery at the forthcoming Liverpool autumn exhibition.

### *Health of Birkenhead: Dr. Marsden's Report for 1897.*

The annual report of the medical officer of health of Birkenhead on the sanitary condition of the borough just issued records a steady improvement in the health of the inhabitants, the death-rate being lower than in any year since 1881 with the single exception of 1894. The density of the population is now 28·83 per acre over the whole borough, against 20·06 at the time of the incorporation twenty years ago, the population being then 77,260 compared with 111,000 in the middle of 1897. The pressure is chiefly felt in the townships of Birkenhead and Tranmere; the density in Birkenhead being 50·62 per acre, against 39·33 in 1878, and in Tranmere 31·83 per acre, compared with 17·64 in the same year. During the year 1897, 4982 nuisances were reported, 4666 being abated without compulsion. Dr. Marsden remarks that in some hotels girls follow their occupation for upwards of 100 hours a week, and he considers it desirable that the benefits of the Shop Hours' Act should be extended to them also, restricting their working hours to 74 per week. The medical officer states that the quality of the water is excellent and that the average supply is 17 gallons per head. As far as bacteriological examination of the water is concerned it was found that the Spring Hill well is the most perfect, the Borough-road coming next in order. Dr. Marsden has not confidence in the future quality of the Flaybrick-hill source. Altogether the report as affecting the water-supply is very satisfactory. During the past year 402,652 lb. of meat were condemned as unfit for human food, representing 124,662 lb. more than were seized in the previous year. The total number of seizures of unwholesome food was 1618. Of the total quantity of meat seized 377,869 lb. were condemned at the Woodside and Wallasey lairages. During the year numerous complaints had been received of offensive effluvia from open sewer ventilators. The medical officer expresses the opinion that the ventilators are a nuisance and in narrow streets a distinct danger and suggests that the whole of the grids should be closed and all interceptors between house drains and the sewers removed. Every ventilating shaft attached to the house drains would then act as a ventilator for relieving the gaseous pressure in the sewers, while affording absolute immunity from the danger of forcing the house-traps. During the year 2028 cases of infectious diseases were notified, being 1050 less than in 1896. The birth-rate was 31·68 per 1000 of the population for the whole borough and the death-rate was 18·39 per 1000 of the population. The birth-rate was 0·8 per 1000 lower than the average for the preceding ten years, and the death-rate was 1·5 per 1000 lower.

### *Children's Convalescent Home, West Kirby.*

The Lord Mayor of Liverpool and the Lady Mayoress visited the West Kirby Convalescent Home on June 29th and expressed themselves highly pleased with all the arrangements provided for the comfort of the children. Last year 832 children received the benefits of the institution, staying an average time of three and a half weeks. The average number of children in the home during the year was 57. There are 76 children in residence at the present time, and so great is the demand for admission that all the prospective vacancies are filled up to the end of July. The committee contemplate the extension of the building by the erection of a new wing at a cost of £3500, which will be begun as soon as the sum of £2000 shall have been guaranteed. Subscriptions amounting to £900 have already been received towards this purpose.

### *Bequests to Liverpool Hospitals.*

By the will of the late Mr. Andrew Gibson, shipowner, of Liverpool and West Kirby, the following charities have received £100 each: the Liverpool Royal Infirmary, the Royal Southern Hospital, and the Liverpool Northern Hospital.

### *New Cheshire Infirmary.*

Mr. W. H. Verdin, D.L., is about to present to the towns of Winsford and Middlewich a new infirmary, which by special permission of Her Majesty is to be called the Albert Infirmary. Mr. Verdin will also provide for the furnishing of the infirmary with a complete equipment. The Duke of Westminster has consented to perform the opening ceremony.

**July 12th.**

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Meeting of the British Medical Association at Edinburgh.*

THE recent Army Warrant dealing with the reconstruction of the Army Medical Service has given rise to the hope in some quarters that a corresponding alteration will ere long be made in the Volunteer Medical Service. With a view to discussing the position it is hoped that a meeting of Volunteer medical officers may be held in Edinburgh during the visit of the Association. Information regarding this meeting may be obtained in the reception room.

### *Hawkhead Asylum.*

The hospital in connexion with this asylum was formally opened on July 8th. A large company of ladies and gentlemen, including the representatives of the Govan Parish

Council, Dr. Clouston, Dr. Yellowlees, and others, travelled by special train from Glasgow to attend the ceremony. It is now seven years since building operations were commenced and the asylum to accommodate 300 patients was opened in 1895; the present hospital has accommodation for 200 patients. After the ceremony an address was delivered by Dr. Clouston, of Morningside Asylum, Edinburgh, who spoke at length on the modern treatment of the insane. Dr. Clouston remarked on the value of hospitals in connexion with asylums and claimed that the first building devoted to such a purpose was the one at Morningside. He expressed his gratification at the extension of this system, which had received the commendation of the Commissioners in Lunacy. The Hawkhead hospital seemed to him to combine all the scientific ideas which were known for the amelioration of the insane.

*Important Prosecution under the Medical Act.*

At Glasgow Sheriff-court on July 8th Abraham S. Eastburn, who was alleged to call himself physician and surgeon, professor, American eclectic medical specialist, and using the letters A.M.S., was charged at the instance of the Scottish branch of the General Medical Council with having been guilty of an offence within the meaning of the Medical Act, 1858, in so far as during the month of June, 1898, he falsely pretended to be, and took, or used, the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, or other names, titles, or descriptions, implying that he was registered under the Medical Act, or that he was recognised by law as a physician or surgeon, or a practitioner in medicine, whereby he had incurred a penalty not exceeding £20. Mr. R. P. Lamond appeared for the prosecution and Mr. A. S. D. Thomson, advocate, represented the respondent. Evidence was led for the prosecution. William M. Leitch, printer, produced specimens of bills which he printed for the respondent. He printed 20,000 of the large bills in the course of a year. A million of the small handbills were ordered at a time, but the delivery was spread over a long period. Robert Forrester deposed that he was handed one of the respondent's bills in Hope-street and that he took the name of the man who was delivering the bills. He also described the respondent's premises, which bore a large sign with the words "Consulting Rooms. Prof. Eastburn, A.M.S." James Robertson, solicitor, registrar to the Scottish branch of the General Medical Council, produced the Medical Register to show that the respondent's name was not in the official list. He said there was no such title as "A.M.S." granted by the universities or medical corporations in the United Kingdom. "M.S." was the recognised abbreviation for Master in Surgery. Members of the public had often directed his attention to the respondent's bills. The subject had also been brought before the General Medical Council, which decided unanimously to institute the present proceedings. In the end Eastburn was convicted and fined £20.

July 13th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

*The Irish Medical Association.*

THE Committee of Council met on July 5th and further considered amendments to clauses in the Local Government Bill which affect the medical profession.

*The Health Exhibition, Dublin.*

A meeting of the committee was held at the Institute of Civil Engineers of Ireland on July 4th, when the large number of English firms who had applied for and had been granted space was noted. The offer of Messrs. Henderson and Sons to lend plants and flowers for decorating the building was accepted with thanks.

*The Ulster Medical Society.*

The annual meeting of the Ulster Medical Society was held on July 7th in the Belfast Museum, Dr. Lindsay, the President, being in the chair. The reports of the secretary and treasurer were passed. These indicated that the society is in a most flourishing condition. There are 151 members and the attendance at the meetings showed an average each night of over 43. The balance in hand at present is £25 10*s.* The following office-bearers were elected for next session:—President: Dr. Joseph Nelson. Vice-Presidents: Dr. John Campbell and Dr. David Gaussen. Treasurer: Dr. John McCaw. Secretary: Dr. James Colville. Pathological secretaries: Dr. J. Lorrain Smith and Dr. Lynass. Librarian: Dr. Cecil Shaw. Council: Professor Byers, Dr. McKisack, Dr. Calwell, Dr. J. Walton Browne, Dr. E. C. Bigger, and Mr. W. G. MacKenzie.

*The Death of Dr. David Johnston.*

I regret to announce the death of one of the best known and most highly respected practitioners of Belfast—Dr. David Johnston, who died at his residence in that city on July 6th from cerebral disease, at the age of sixty-three years. A few years ago he fractured his patella and he was always slightly lame since that accident. Two years ago he had another fracture of a leg and since then he had practically retired from active practice. Dr. Johnston was born near Castledawson, in County Derry, in 1835, but at an early age he came to Belfast and entered Queen's College, where he was a most hard-working student. He graduated M.D. of Queen's University in 1866 and in the same year he became a Member of the Royal College of Surgeons of England. He shortly afterwards began practice in Belfast, where he spent the remainder of his life and where he had an extremely large *clientèle* amongst the working and middle classes, with whom he was a great favourite and by whom he was deeply respected for his skill, his care, and his unfailing kindness. He was one of the best accoucheurs of his day in Belfast. The funeral took place on July 8th, an immense concourse of medical *confrères*, friends, and former patients attending to show a last act of respect. He leaves a family of two sons and one daughter, his wife having died seventeen years before him.

*Pauper Attendants in the Belfast Union Infirmary.*

The Local Government Board have written to the Belfast Board of Guardians stating that their inspector, Mr. Agnew, has again informed them that the pauper attendants act as assistant nurses and not as cleaners only, and they wisely recommend the guardians to confer with their responsible medical officers on the subject, the Local Government Board being very properly opposed to paupers being allowed to attend on the sick.

*Sale of the Omagh Infirmary.*

At a meeting of the County Tyrone Infirmary Board (held on July 8th) a resolution was passed in favour of selling the old building to the post-office authorities.

*The Laboratories at Queen's College, Belfast.*

In the House of Commons on July 8th on a discussion of the vote of £136,975 to complete the sum for public works and buildings in Ireland Mr. Arnold-Forster pointed out that the item for Queen's College, Belfast, was part of an expenditure which had already been sanctioned for that place and he thought it was high time that laboratories in this College should be completed. That College was doing better work than any of the other Queen's colleges and it was turning out a large number of active men. The medical side of the College was increasing in importance and members every year.

*Belfast Royal Hospital.*

A special meeting of the corporation was held on July 11th to consider the proposed revised charter for the government of the new Royal Victoria Hospital. The principal alterations in the charter as agreed upon between the Board of Management of the Royal Hospital and the new Victoria Hospital are as follows: 1. The hospital is to be called "Royal Victoria" instead of "Royal" Hospital. 2. The qualification of life governors to remain as at present (subscription of £50), but the qualification of annual subscribers to be £2 2*s.* instead of £1 1*s.*; present life governors of the Royal Hospital retain their status as regards the new hospital. 3. Medical, surgical, and other official appointments to the hospital to be made by the board of management instead of as hitherto by the general committee. 4. The representatives of the medical and surgical staff on the general committee to be 5 instead of 2 members and one-fifth of the 60 persons elected to the general committee in addition to the life governors and honorary officers to be ladies. 5. The board of management to consist of the honorary officers, 5 annually elected members of the medical and surgical staff, the present life governors, with 15 life governors and 15 annual subscribers elected by the general committee; one-fifth of the

said life governors and annual subscribers if possible to be ladies and one-third of each class elected to retire annually. 6. The stated meetings of the general committee and board of management to be abolished and in lieu thereof meetings to be held at such times as either may respectively appoint, the quorum to be 7 instead of 12, and the board of management to have power to appoint committees as they may see fit. The management and direction of all matters having reference to the building of the new hospital, &c., is to be vested in a committee of the subscribers of the moneys for the new hospital until it is opened, when such committee shall cease to exist, and the annual meeting of the corporation is to meet in March. The charter, as amended and submitted to the meeting, was (some of those present dissenting) approved of.

*Cork Medical Benefit Association.*

A general meeting of the members of the Cork Medical Benefit Association was held on July 9th at the offices of the association, Marlborough-chambers, Mr. William Egan being in the chair. The chairman expressed his gratification at the large number of members present and was glad to be able to tell them that their membership roll was steadily increasing and that the work of the association was being conducted with great success. The secretary (Mr. H. J. Casey) then submitted a financial statement, which showed that as the result of the past six months' working the association had a total balance to their credit of £74 6*s.* 9½*d.* after meeting all claims.

July 13th.

## PARIS.

(FROM OUR OWN CORRESPONDENTS.)

*The Treatment of Strabismus.*

AT the meeting of the Academy of Medicine held on July 5th M. Panas communicated some observations upon this subject. He said that the squinting eye was the one which deviated most from the line of vision. Nevertheless strabismus was only apparently unilateral. If the phenomena accompanying this condition were analysed in detail it would be found that the strabismus was always bilateral, and if it appeared unilateral that was because the patient only used the eye which was least affected and in overcoming the deviation of this one exaggerated the obliquity of the other. As for therapeutic measures M. Panas held that as the affection was bilateral so there must be a bilateral operation. In 230 cases M. Panas performed tenotomy of both internal recti and stretched them in addition, thus lessening their tendency to over-action. M. Panas never performs advancement, finding a simple tenotomy sufficient. In 220 cases he had never seen any over-correction, or if there were a little it was only temporary. Of 220 convergent cases of strabismus he had 190 in which the result was immediately successful. In those which were unsuccessful the result was not over-correction but under-correction. In 10 cases M. Panas rectified this by advancement of the antagonistic muscles and in every case with success.

*Creasote in Pulmonary Phthisis.*

At the same meeting of the Academy M. Savine said that the favourable action of creasote in tuberculosis was due, firstly, to its bactericidal action on the microbes which accompany the bacillus of Koch, such as streptococci, pneumobacilli, and the like; secondly, to its stimulating action on nutrition, so that the phagocytes which prey upon the bacillus of Koch are increased in number; and, thirdly, to its chemical action upon the toxins secreted by the tubercle bacillus. The patients to whose cases M. Savine referred were those suffering from pulmonary phthisis of the first and second degrees but were not cachectic. Creasote was administered (*a*) by hypodermic injections of a 15 per cent. solution in olive oil with sometimes the addition of a little myrtol or eucalyptol in a dose of 10 to 40 cubic centimetres; (*b*) by continuous inhalations of from 5 to 10 grammes of an alcoholic solution containing 33 per cent. of creasote; and (*c*) by the mouth, either in oil, milk, or as an emulsion, beginning with a dose of 40 drops and gradually increasing it to 300 drops in the twenty-four hours. M. Savine objects to the administration of creasote in capsules, pills or cachets, for such methods are, he considers, responsible for the various gastric disturbances which have been set down to creasote. It should always be administered in a considerable quantity of fluid and preferably at the same time as food.

*The Operative Treatment of Cancer of the Rectum.*

At the meeting of the Society of Surgery held on July 9th M. Quenu read a paper upon the operative treatment of rectal cancer, especially with regard to the removal of these growths by an abdomino-perineal route. M. Quenu had somewhat modified the conclusions which he had formerly laid before the society. He had given up Kraske's operation and now followed one of two methods—the perineal in cases where the growth did not extend further than 10 centimetres from the anus and in other cases the abdomino-perineal. M. Quenu considered that the operations of M. Gaudier and of M. Chalot were faulty in not carrying out complete asepsis during and after the operation and in causing a great loss of blood. His own method was as follows: first stage, opening the abdomen and ligature of the hypogastric arteries; second stage, liberation of the sigmoid flexure and formation of a left iliac anus; third stage, commencement of the freeing of the rectum; fourth stage, perineal extirpation. The preliminary ligature of the arteries resulted in a great economy of blood, and the following stages were very simple. In M. Quenu's opinion this method would be the one of the future, for it allowed the surgeon to remove the majority of growths with a minimum of risk.

*The Treatment of Lead Colic by Injections of Artificial Serum.*

At the meeting of the Society of Biology held on July 2nd M. Delearde gave an account of nine patients who had been treated in the hospital of Lille. Eight were white lead workers and the ninth was a plumber. They had all worked in the lead for about two years and some of them had already suffered from colic, constipation, muscular pains, and peripheral neuritis. The sole treatment adopted was the injection of large doses of artificial serum (Hayem's formula) under the skin of the abdomen. Only one injection was made and that a quantity of 500 c.c. This dose proved sufficient to entirely relieve all the patients except one who was particularly severely affected, and she had to have an injection of 1 litre in all given in two doses at an interval of one day. The serum had no action upon the paralyses, but it did away with the muscular pains, the constipation, the headache, and the vomiting. Relief was given in a far shorter time than by the old methods of treatment.

*The Ninth Congress of Alienists and Neurologists.*

The ninth Congress of French Alienists and Neurologists will be held at Angers from Aug. 1st to 6th, 1898. The subjects for discussion are as follows:—Monday, Aug. 1st: Post-operative Psychical Disturbances; Aug. 2nd: The Part played by Arteritis in the Pathology of the Nervous System; Aug. 3rd: Transitory Delirium from a Medico-legal Point of View.

*The Biological Institute in the Rue Dutot.*

M. Brebant, the architect of the Pasteur Institute, has just been charged with the designing of a large building to contain laboratories and other rooms necessary for the model biological institute about to be built in the rue Dutot, opposite to the Pasteur Institute. Some years ago the ground was bequeathed by an anonymous lady to the Administrative Council of the Pasteur Institute which undertook to build a hospital upon part of the site thus assigned. The works have just been begun and the foundations will soon be laid. The architect hopes that the new institute will be ready for opening before 1900. The expenses are provided for out of the donation of 2,000,000 francs made last year by the Baroness Hirsch. Two-thirds of this sum, or at most three-quarters, will be employed in the building and furnishing; the remainder of the money will be reserved as an endowment. The new institute, the plans of which were designed by the architect of the Pasteur Institute in collaboration with the professors of this institution, will be unique. In it there will be treated patients suffering from those affections which are the special study of Dr. Roux. The new institute, in common with the Pasteur Institute, will be under the direction of M. Duclaux, who has appointed M. Gabriel Bertrand as head of the laboratory of biological chemistry. The biological department of the Sorbonne will be ultimately transferred to the new building in the rue Dutot.

July 11th.

# BERLIN.

(FROM OUR OWN CORRESPONDENT.)

*The German Medical Practitioners' Association.*

THE delegates of the German Medical Practitioners' Association (Deutscher Aerztevereins Bund) held their annual meeting on June 28th and 29th at Wiesbaden. The principal subject of discussion was the admission of women into the medical profession. Medical women are very rare in Germany, as they are not permitted to take a German qualification. The few that there are have obtained their qualifications abroad, principally in Switzerland, and are therefore regarded by the laws of Germany as unqualified practitioners. Lawyers are divided in opinion as to the possibility of women becoming qualified under the present laws. A very serious obstacle is, or at least has been, caused by the regulation that German medical students must pass the *Abiturienten-Examen* at a German gymnasium before beginning their medical curriculum and there has hitherto been no gymnasium where women were admitted, but this state of things is now altered as a women's gymnasium has been founded by private means in Berlin. The discussion at the Practitioners' Association was opened by Professor Penzoldt of Erlangen, who first of all described the position of medical practice by females in countries where they are legally recognised as qualified. America, he said, affords no precedent for Germany, owing to the great difference in the social conditions of both countries. In England female practitioners are wanted for the native population in India, where religious prejudices often prevent native women from consulting medical men. In Russia the relatively small number of medical men, especially in the vast country districts, has induced the Government to look for medical aid wherever it may be obtainable, and on this account medical women have been encouraged. In Switzerland, the El Dorado of women's emancipation, there are only 23 ladies actually engaged in medical practice; the others have left the profession. The Swiss university professors are of opinion that the female students come up to the average level, but that they hardly ever excel in either knowledge or dexterity. Women are not strong enough either for the fatigues of country practice or for the performance of some surgical and gynæcological operations, so that female practitioners must necessarily fail in the struggle for existence. Their advocates say that the treatment of the diseases of women and children ought properly to be in the hands of female practitioners, and cases are quoted where women through bashfulness have deferred consulting a medical man until their condition became hopeless, but the fact is that the female gynæcologists in actual practice hardly ever undertake more than gynæcological examinations and minor operations and generally call in medical men for serious cases and important operations. Medical practice by women would therefore not be of any advantage to their own sex, whilst their admission as qualified practitioners would be injurious to the medical profession which already suffers greatly from overcrowding and from the competition of quacks. It seems strange, Professor Penzoldt said, that the medical profession should be the first to be thrown open to women, considering that the necessary course of study is more arduous and prolonged than is the case in the other learned professions. To give women a fair trial they should be allowed to enter the dental or the pharmaceutical professions, where technical ability is more wanted than scientific training. Midwifery practice would also be greatly improved if women of the better classes could be induced to enter on that career. Professor Penzoldt finally summed up his conclusions as follows. The admission of women to medical practice would be (1) of no advantage to the sick; would be (2) injurious rather than beneficial to the medical women themselves; and would be (3) prejudicial to the universities and to the medical profession. When women are admitted to the practice of medicine they must equally be allowed to engage in all the other academic careers. An animated discussion followed Professor Penzoldt's speech, the general result being that the delegates present agreed with his views. The other subjects considered at the meeting were of minor interest.

*The State Examination in Medicine.*

The Imperial Statistical Office has recently published the results of last year's State examinations. There were 1295 medical students admitted to the examination, of whom 1079 passed within the regular time. The greatest number (179) were examined in Munich, 152 in Würzburg, and 139 in Berlin. Berlin, although resorted to by the largest number of students, thus holds only the third place in numerical order, the explanation being that the Berlin State examination is regarded as the most difficult in the empire. The highest commendation bestowed—*sehr gut*, i.e., very good—was, in fact, not given to any of the candidates in Berlin, while in Munich and Leipzig 14 candidates obtained it. The State examination was passed by 23 foreigners, of whom one was an Englishman and two were Americans.

July 11th.

# AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

*The Hospital Saturday Fund and the Sydney Hospitals.*

SEVERAL of the regular subscribers to the Hospital Saturday Fund in Sydney complained that on applying for admission to the hospitals assisted by the fund they were questioned as to their financial position and given to understand that payment was expected, notwithstanding that they presented a letter certifying that they were subscribers to the fund and were unable to pay for medical attendance. The committee of the Hospital Saturday Fund called a meeting of its members and delegates representing the regular subscribers to consider the complaints. The committee considered the complaints well founded and wrote to the governing bodies of the hospitals urging them to accede to the claims of the regular subscribers to the fund that they should be admitted to any of the charities assisted by the fund without being catechised as to their financial position or subjected to pressure for payment direct to the hospital. The committee, in recommending the claims of the subscribers, pointed out that "the regular subscribers to this fund consist entirely of wage-earners, mostly of the artisan class, that they contribute per head as much as it is reasonable to expect from them in support of their hospitals, and that the aggregate contribution is more than sufficient to pay the full cost and maintenance and treatment of any proportion of the whole number likely to require hospital treatment. In proof of this, while the fund since its inception has distributed among the various local hospitals the sum of £12,500 it has been called upon to recommend only 125 applicants for admission to those hospitals, the contribution being equal to £100 for each case recommended." The matter was referred to a joint committee of the Sydney Hospital and the Prince Alfred Hospital and this committee unanimously reported that the request of the subscribers should not be acceded to. This report was adopted by the hospitals.

*Tenure of Staff at Sydney Hospital.*

At a recent meeting of the board of directors of the Sydney Hospital it was proposed that in order to provide for an equitable system of promotion among the junior members of the honorary medical staff it was desirable that members of the staff holding the rank of honorary medical officers should hold office for a limited number of years and that the number of years during which full honorary medical officers may hold office should not exceed 12, divided into two periods of 6 years. After discussion the motion was negatived by a large majority.

*Position of the Staff at the Launceston Hospital.*

The hospital at Launceston is a growing institution. Originally founded as a cottage hospital it has gradually increased in scope. The medical control of the hospital has, however, remained the same in the hands of paid officers—a medical superintendent and a resident medical officer. For a long time the medical practitioners in the city have been agitating for an alteration and for the appointment of an honorary staff. Some time ago an honorary staff was appointed, but it proved to be such in name only, the work being still done by the paid officers. The local branch of the British Medical Association recently sent a deputation to the hospital board, asking for a change in the system of medical supervision so as to bring it into harmony with the practice obtaining in other countries. The chairman of the board, in reply, pointed out that the hospital was worked under an Act of Parliament

and the board had no power to alter the arrangements, but it could recommend changes to be made by Parliament. The board would give every consideration to the views of the deputation, but the present system had worked well for the hospital in the past. The board was responsible for the expenditure and had control of the medical staff, and it did not care to retain the responsibility without the control. It does not seem probable that any change in the management will be made.

*Site for Infectious Diseases Hospital, Melbourne.*

It is almost certain that the site at the Yarra Bend Asylum Reserve will be adopted for the new Infectious Diseases Hospital, Melbourne. The neighbouring municipalities have withdrawn their opposition and the Board of Health has approved of the site.

*Thirlmere Home for Consumptives, New South Wales.*

The Committee of the Queen Victoria Consumptive Homes Fund in Sydney decided on May 5th that the Executive Committee should take over the Thirlmere Home and part of the grounds on a lease of two years as a temporary hospital for phthisical patients. The hospital will be maintained by subscriptions, by the interest accruing on the amount in hand, and the aid expected from the Government paying £1 for every £1 subscribed by the public.

*New Out-patient Department for the Melbourne Hospital.*

The committee of the Melbourne Hospital has definitely decided to erect a new out-patient department and recently waited on the treasurer to ask for Government assistance. The treasurer would not give a definite promise, but the committee is going on with the work. Meanwhile it is involved in a dispute with the Board of Health as to the plans, the board insisting on certain fire-escapes and other alterations involving a large additional expenditure.

*Austin Hospital for Incurables, Melbourne.*

Matters have not been working smoothly at the Austin Hospital for Incurable Disease (Melbourne) for some time past. The medical officer is in supreme control over the nurses, domestic and general arrangements, as well as the patients. This arrangement has not worked well and the committee has determined on a change. It has been decided to appoint a medical officer at a lower salary, whose duties will be confined to the patients; to appoint a matron with full control of the domestic arrangements, and a superintendent of nurses to be responsible for the nursing department. The resignation of the present medical superintendent, Mr. W. B. Norcott, has been accepted and he will be granted three months' leave of absence on full pay in recognition of his excellent services to the hospital during his six years' tenure, which the committee fully acknowledges.

*St. Vincent's Hospital, Melbourne.*

Some changes have been recently made in the honorary staff of this hospital. Dr. David Grant, M.A., has been appointed honorary physician to in-patients in place of Mr. P. Moloney, resigned; and Dr. Eustace Keogh has been promoted from the post of out-patient to in-patient physician in place of Dr. Riordan, resigned. Dr. Frank Newman has been appointed to Dr. Keogh's position and an additional out-patient physician has been appointed—Dr. J. H. McGee.

June 4th.

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SOUTH WALES UNIVERSITY COLLEGE.—A meeting of the council of the South Wales and Monmouthshire University College was held on July 6th. A communication was read from the committee of the Glamorganshire and Monmouthshire Infirmary asking whether it was the intention of the College to complete at an early date the curriculum of the medical school. The council, although feeling that this was desirable, thought that owing to their financial position an endowment of at least £25,000 ought to be provided before they could establish a complete medical school on a sound basis. Professor Andrew Francis Dixon, B.A., M.B., B.Ch. (Trinity College, Dublin), was appointed dean of the medical faculty, and Mr. George Arbour Stephens, M.D., B.S., B.Sc. Lond., was appointed teacher in hygiene and physiology in the technical school.

# Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in the subjects indicated:—

Wednesday, July 6th:—

*Anatomy and Physiology.*—**Philip Lansdown Hickes, University College, Bristol, and Guy's Hospital; Hugh Dorsett Kempthorne, Ricardo Luis Jiménez, and Percy James Nash, Guy's Hospital; Richard Griffith, Cambridge University, London Hospital, and Mr. Cooke's School of Anatomy and Physiology; Edward Newbury Thornton, Philip Anthony Green, and Christian Parker, London Hospital; George Dewick, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Charles Woolmer Davies, Archibald Edward Hill, and Robert H.[a] William Garle, St. Thomas's Hospital; Francis Grey Bennett, Cambridge University and University College, London; Gordon Herbert Hackney, University College, London; Percy Reginald Fort and Henry Tregellas Doble, St. Mary's Hospital; Edward Lister Martin, Henry E. Gaskin Boyle, Maitland Bodley Scott, and George Harvey Low, St. Bartholomew's Hospital; Alfred Mason and Fred Bailey Penfold, Middlesex Hospital.**

**14 gentlemen were referred in both subjects.**

Thursday, July 7th:—

*Anatomy and Physiology.*—**Alfred Sheppard Grimwade, Melbourne University and St. Thomas's Hospital; Thomas W. Hardwick Downes and John Walker, St. Thomas's Hospital; William Morton Robson, Stanley S. Howard Shannon, Reginald Prynne Marshall, G. Brooke Forbes Churchill, and Francis M. Maxwell Ommanney, Guy's Hospital; Alfred John Courzens, Charles Leonard Traylen and Francis Inman Trimmer, London Hospital; Walter Gray Paget, George Mervyn Seagrove, Cyril Evelyn Hogan, Leslie Edward Hughes, and Verner George Heseltine, St. Bartholomew's Hospital; George William Curtis, Godfrey Faussett Rugg, and Frank Elliott Bolton, University College, London; James MacBain Ross, Melbourne University and St. Mary's Hospital; John Conrad G. Kunhardt, St. Mary's Hospital; Adrian R. Fortescue Hubbard, Charing-cross Hospital; Lancelot Walter Shadwell, St. George's Hospital; and Graham Pallister Young, King's College, London.**

**11 gentlemen were referred in both subjects.**

Friday, July 8th:—

*Anatomy and Physiology.*—**Francis Curthbert Jobson, Westminster Hospital; Robert Markham Carter, William Edward Houlbrook, Keppel Hart-Reeds, John W. Smyth Seccombe, St. George's Hospital; Thomas Scarbrough Dudding, London Hospital; John Henry Wroughton, Victor John Duigan, St. Bartholomew's Hospital; Sidney H. Charles Bent and Frank Wybourne Smith, Guy's Hospital; Ernest Edward Semmence, Edinburgh University and St. Thomas's Hospital; Walter F. Hamilton Vaughan, George Ralph Cox, and Eric Craiger Lindsey, St. Mary's Hospital; and Edwin Augustus Houchin, Middlesex Hospital.**

**15 gentlemen were referred in both subjects.**

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates at the primary examination have passed in the subjects indicated:—

PART I.

*Biology.*—**A. B. Gosse; E. M. Handley, Royal Free Hospital; and M. S. Jevons.**

*Chemistry.*—**G. M. Crockett and K. A. Dawson, Royal Free Hospital; A. B. Gosse; M. R. Martin and F. Murray, Royal Free Hospital; W. A. C. Biven; A. U. Parkhurst, Cardiff; T. G. Prosser and L. G. Simpson, Royal Free Hospital; and A. Whitby, Dublin.**

*Materia Medica and Pharmacy.*—**K. A. Dawson, Royal Free Hospital; L. Demergue, Paris; L. Denny, Royal Free Hospital; P. T. Goodman, St. Thomas's Hospital; R. A. Lyster and F. H. Maberly, Birmingham; C. J. Marsh, University College Hospital; C. G. Meade, St. Bartholomew's Hospital; H. R. Miller, Guy's Hospital; F. Murray, Royal Free Hospital; A. U. Parkhurst, Cardiff; L. K. Tickner, Durham; and A. Whitby, Dublin.**

PART II.

*Anatomy.*—**H. H. Beale, St. Mary's Hospital; A. E. Brown, Royal Free Hospital; P. J. R. Bucknill, Manchester; P. C. Burgess, Middlesex Hospital; T. M. Burton, Royal Free Hospital; R. N. de V. Dawson, St. Thomas's Hospital; S. de Carteret and C. D. A. Dowman, St. Bartholomew's Hospital; E. A. Dunn, Royal Free Hospital; J. C. Furness, Charing-cross Hospital; A. E. Gilford, R. Gillett, H. M. O. Jones, and D. E. Lockwood, Royal Free Hospital; C. L. Mandl, Edinburgh; L. S. Molony and F. M. Payne, Royal Free Hospital; W. Roper, Edinburgh; P. G. Sheppard, Cambridge and Liverpool; A. D. Sibree, Royal Free Hospital; P. S. Stokes, Sheffield; M. E. Unwin, Royal Free Hospital; and G. H. Watson, St. Bartholomew's Hospital.**

*Physiology.*—**J. M. Anderson, Aberdeen; A. E. Brown, Royal Free Hospital; P. J. R. Bucknill, Manchester; T. M. Burton and E. Courtauld, Royal Free Hospital; R. N. de V. Dawson, St. Thomas's Hospital; S. de Carteret and C. D. A. Dowman, St. Bartholomew's Hospital; E. A. Dunn, Royal Free Hospital; B. M. Dunstan, St. Thomas's Hospital; A. B. Edwards, St. Bartholomew's Hospital; J. C. Furness, Charing-cross Hospital; A. E. Gilford, R. Gillett, H. M. O. Jones, and D. E. Lockwood, Royal Free Hospital; C. L. Mandl, Edinburgh; L. S. Molony and F. M. Payne, Royal Free Hospital; A. F. Reardon, St. Thomas's Hospital; W. Roper, Edinburgh; P. G. Sheppard, Cambridge and Liverpool; A. D. Sibree, Royal Free Hospital;**

P. S. Stokes, Sheffield; L. K. Tickner, Durham; M. E. Unwin, Royal Free Hospital; G. H. Watson, St. Bartholomew's Hospital; A. Whitby, Dublin; and F. B. D. Woodroffe, Edinburgh.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentleman having passed the necessary examination has been admitted a Fellow of the College:—

Thomas Hennessy, L.R.C.S., L.R.C.P. Irel.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At a stated meeting of the College, held on July 8th, the following gentlemen were admitted:—

*As Member.*—R. Travers Smith, M.D. Dub.
*As Licentiate.*—A. Cooper Fenn, L.S.A.

FOREIGN UNIVERSITY INTELLIGENCE.—*Chicago (Rush Medical College):* Dr. Henry Baird Favill has been appointed Professor of Experimental Therapeutics. *(Medical College):* Dr. A. R. Edwards has been appointed Professor of Medicine.—*Lyons:* Dr. Bordier has been appointed after public competition *professeur agrégé* of Physics in the Medical Faculty. Dr. Sambuc has been similarly appointed *professeur agrégé* of Chemistry.—*Montpellier:* Dr. Bertin-Sans has been appointed after public competition *professeur agrégé* of Physics.—*Naples:* Dr. Nicola Furgiuele has been recognised as *privat-docent* of Operative Medicine, Dr. Barucco and Dr. Michele de Amicis as *privat-docenten* of Dermatology and Syphilography, Dr. E. de Arcangelis as *privat-docent* of Forensic Medicine, and Dr. Luigi Maramaldi as *privat-docent* of Materia Medica and Pharmacology.—*Paris:* Dr. E. A. Broca has been appointed after a public competition *professeur agrégé* of Physics in the Medical Faculty.—*St. Petersburg (Military Medical Academy):* Dr. M. P. Manassein and Dr. S. T. Kulneff have been recognised as *privat-docenten* of Dermatology and Syphilography.—*Toulouse:* Dr. Gérard has been appointed after public competition *professeur agrégé* of Pharmacy.—*Turin:* Dr. Umberto Monari has been recognised as *privat-docent* of Surgery.—*Vienna:* Dr. Julius Scheff has been appointed Extraordinary Professor of Odontology.—*Warsaw:* Dr. Ushinski has been appointed Ordinary Professor of General Pathology.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—The following have been elected officers and council of the society for the season commencing October, 1898. President: Dr. R. Fortescue Fox (Strathpeffer Spa). Vice-Presidents: Dr. Frederic Bagshawe (St. Leonards-on-Sea), Dr. R. O. Gifford Bennet (Buxton), Mr. Robert Cuffe (Woodhall Spa), Mr. W. Bowen Davies (Llandrindod Wells), Dr. J. Ivor Murray (Scarborough), Dr. Charles Parsons (Dover), Dr. Samuel Hyde (Buxton), Dr. Henry Lewis (Folkestone), Dr. Andrew S. Myrtle (Harrogate), Dr. J. G. Douglas Kerr (Bath), Dr. George Oliver (Harrogate), and Dr. W. V. Snow (Bournemouth). Council: Mr. Walter C. Blaker (Bognor), Dr. Morgan Dockrell (London), Dr. R. Eardley-Wilmot (Leamington), Dr. W. Black Jones (Llangammarch Wells), Dr. H. Laing-Gordon (Forest-hill, S.E.), Dr. John Inglis (Hastings), Dr. C. G. Havell (Felixstowe), Dr. William Haldane (Bridge-of-Allan), Dr. Edmund Hobhouse (Brighton), Dr. John Hackney (Hythe), Dr. Joseph G. Harsant (Bournemouth), Mr. Alfred Haviland (Douglas), Dr. W. Maccall (Southport), Dr. J. Perrott Prince (Natal), Dr. Thomas Macqueen (Eastbourne), Dr. Henry McClure (Cromer), Dr. Patrick Letters (Valencia), Dr. Abraham Thomas (Aberystwith), Dr. W. Moxon (Matlock), Dr. A. W. Orwin (London), Dr. Reginald Pollard (Torquay), Dr. Ernest Solly (Harrogate), Dr. Alfred F. Street (Westgate), Dr. C. H. Tamplin (Ramsgate), Dr. Alexander Thom (Crieff), Dr. C. W. E. Toller (Ilfracombe), Dr. W. J. Tyson (Folkestone), Dr. Leonard Williams (London), Mr. H. H. Ward-Humphreys (Cheltenham), and Mr. George S. Watson (Tunbridge Wells). Chairman of Council: Dr. Samuel Hyde (Buxton). Honorary treasurer: Mr. C. R. B. Keetley (London). Librarian: Dr. Morgan Dockrell. Honorary secretaries: Mr. H. Shirley Jones (Droitwich) and Dr. Septimus Sunderland (London).

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual general meeting of this association was held at the Café Royal, Regent-street, on Tuesday, July 12th. Dr. A. W. Thomas was elected President for the year in succession to Dr. C. T. Brookhouse, and Dr. Younger and Dr. Major Greenwood were re-elected to their respective posts of treasurer and honorary secretary. The following gentlemen were also elected members of Council: Dr. Gabe, Dr. Achard, Dr. Snape, Dr. Naumann, Dr. Wunderlich, Dr. Haydon, Dr. Eady, Dr. Walter Smith, Dr. Edwards, and Dr. Vicars. Dr. Charles Burland was elected vice-president and the honorary secretary on presenting the balance sheet pointed out the satisfactory financial condition of the association and its general progress. After the meeting the members and their friends, to the number of sixty, dined together and spent a very pleasant evening. Dr. F. Roberts, Dr. Heron, Mr. Joseph Smith, Mr. George Brown, Dr. Clement Godson, Mr. Howard Marsh, and Dr. Morgan Dockrell were among the guests. The musical programme was furnished by Madame Minnie Hatch, Miss Rhoda Whiley, and Mr. Stanley Verde, assisted by Dr. Arthur Haydon, who played some admirable violin solos; Dr. Roberts also contributed to the entertainment by singing several songs in his usual excellent manner.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Karl Freiherr von Rokitansky, Professor of Gynæcology in the University of Gratz, on June 21st, aged fifty-nine years. He was the third son of the great pathologist and was for some years attached to the Vienna school as *privat-docent*.—Dr. Karl Edward With, formerly Professor of Clinical Medicine in Copenhagen, aged seventy-two years. He gave up his post about four years ago. His medical writings were chiefly on the subject of heart diseases and diseases of the stomach and intestines.—Dr. Maieff, *privat-docent* of Syphilography in the Military Medico-Chirurgical Academy of St. Petersburg.—Dr. Friedrich Albert von Zenker, formerly Professor of Pathological Anatomy in the University of Erlangen, on June 13th at Reppentin in Mecklenburg, where he was on a visit. He was seventy-three years of age. In early life he had been assistant to Radius in Leipsic and to Rokitansky in Vienna. He went as Professor to Erlangen in 1862 and only retired three years ago. He, together with Professor Ziemssen, founded the well-known *Archiv für Klinische Medicin* in 1865.—Dr. Franz Kretschy of Vienna, who was for some time assistant to the late Professor Bamberger.

THE ADMINISTRATION OF ADDENBROOKE'S HOSPITAL.—At the invitation of a special committee appointed to inquire into the administration of Addenbrooke's Hospital Sir Henry Burdett has made a careful investigation and prepared a report which was presented at the quarterly court held on June 27th. The subjects chiefly considered were the constitution, the expenditure, and the income of the hospital. Sir Henry Burdett's first recommendation is that a selection committee for the purpose of appointing the honorary medical officers of the hospital be set up at the first general court in each year and that it consist of 50 governors, 18 of whom shall be the members of the committee of management subsequently referred to, 8 the honorary physicians and surgeons for the time being, and 24 other governors—namely, 8 from each of the three groups of governors representing respectively the county, the borough, and the university. It is further suggested that a new by-law should be passed providing that any candidate who directly or indirectly canvasses the governors shall be disqualified. Another recommendation is that in lieu of the open weekly board of governors as at present existing, which any governors who please may attend and vote at, there should be appointed a committee of management, consisting of, say, 18 lay governors, with some or all of the physicians and surgeons, who collectively number 8, one-third of the members of this committee to retire every year, but to be eligible for re-election. With regard to the expenditure Sir Henry Burdett is of opinion that if the governors err at all they err, and have erred for some years, not in the direction of over-expenditure, but of under-expenditure. The cost of provisions, including the board of both patients and staff, has for the last three successive years been 6*s.* 4*d.*, 6*s.* 1*d.*, and 6*s.* 2*d.* per head per week. During each of these same three years the income of the hospital from all sources, including legacies, has exceeded the total ordinary and extraordinary expenditure. Sir Henry Burdett is confident that it would tend to promote economy, to increase the income, and to place the hospital administratively in a strong position if a resident superintendent were appointed at a salary of, say, £250 per annum with board and residence. He should be charged with the general administration of the institution, the supervision and purchase of stores, and the general discipline of the household so far as the male servants are concerned.

# THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF PRESIDENT.

A QUARTERLY meeting of the Council was held on July 14th, the President, Sir WILLIAM MACCORMAC, being in the chair. The election of President took place at the close of business and resulted in the re-election of Sir William MacCormac, Mr. T. Pickering Pick and Mr. Howard Marsh being appointed Vice-Presidents.

BEQUESTS AND DONATIONS TO HOSPITALS.—The trustees of the late Mr. Richard Gibbs have contributed out of his estate £1000 to St. Thomas's Hospital to endow a bed in memory of the deceased.—The committee of the Alexandra Hospital for Children with Hip Disease, Bloomsbury, has received £203 3*s*., Mrs. Raphael's collection.—The treasurer of the Royal Sea-bathing Hospital, Margate, has received from the executors of Miss Marter £168 7*s*. 1*d*.—The members of the London Metal Exchange have contributed £788 to the London Hospital as a donation to its funds.—The late Mr. John Bennett of Bristol has bequeathed £500 to the Bristol Hospital for Sick Children and Women and £1736 each to the Bristol Royal Infirmary and Bristol General Hospital.—The treasurer of the Scarborough Hospital and Dispensary has received £250, a legacy bequeathed by the late Dr. Vandyke Carter of Scarborough.—An anonymous donor of £1000 has endowed the Kingsley bed in perpetuity at St. Thomas's Hospital, London, in memory of the late Rev. Charles Kingsley of Eversley.—The treasurers of the Middlesex Hospital have received £105 from the Worshipful Company of Drapers; also £250 from the Goldsmiths' Company; also £105 from the Mercers' Company; also £100 from the Grocers' Company; also £300 from the trustees of Smith's (Kensington Estate) Charity.—The Baroness Hirsch has contributed £100 to the Queen Charlotte's Lying-in Hospital, Marylebone-road, London. The committee of the same institution has received a donation of £105 from Messrs. J. S. Morgan; also £100 from the trustees of Smith's (Kensington Estate) Charity.—The council of the Chelsea Hospital for Women, Fulham-road, has received £1000 bequeathed by the late Mrs. E. H. Harris.—The committee of the Royal Ophthalmic Hospital, Moorfields, London, has received £900 bequeathed by the late Mrs. E. H. Harris; also £100 from Smith's (Kensington Estate) Charity; also £703 7*s*. 2*d*. from the trustees of the late Miss Helen E. Furner; also £100 from Messrs. C. Hambro and Sons.—The committee of the North-Eastern Hospital for Children, Hackney-road, Shoreditch, has received £600 from the Goldsmiths' Company.—The treasurer of the Italian Hospital, Queen-square, Bloomsbury, has received £503 17*s*. 8*d*., the result of the ball held in May last at the Royal Institute of Painters in Water-colours, Piccadilly.—The committee of the Hospital for Diseases of the Throat, Golden-square, London, has received £1000 from the executors of the late Mrs. E. H. Harris and £100 from the executors of the late Mr. H. L. Beddington.—Mr. Herbert J. Allcroft has contributed £105 to the St. Mary's Hospital, Paddington.—Lord Iveagh has given a donation of £1000 to the Endowment Fund of the Eastern Counties Asylum for Idiots.—The committee of the London Fever Hospital, Liverpool-road, Islington, has received from the London Corporation £105 and from the trustees of Smith's (Kensington Estate) Charity £200.—The treasurer of Guy's Hospital has received from Sir James Blyth, Bart., £105.—The committee of the North London Hospital, Gower-street, London, has received a legacy of £421 10*s*. 2*d*. from Mrs. Lecky's trust; also legacies of £90 from Mr. H. L. Beddington and of £6000 from Mrs. E. H. Harris; also a donation of £1200 from Mrs. C. Horsley to found a bed in remembrance of her brother, John P. Potter; also £300 from the trustees of Smith's (Kensington Estate) Charity.—The treasurer of St. Mark's Hospital, City-road, London, has received £1000 from Mrs. D. Henty to endow a bed to be called the "Julia Henty Bed."—The committee of the Great Northern Central Hospital, Holloway-road, N., has received £400 from the trustees of Smith's (Kensington Estate) Charity; also £100 from the Goldsmiths' Company; also £125 from Mr. T. Braithwaite, jun., being the second half of his promised contribution of £250.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

*Habitual Inebriates Bill.*

THIS Bill passed through the Grand Committee with very few alterations. On the motion of Mr. PICKERSGILL a proviso was inserted in Clause 4 to the effect that no regulation of the Secretary of State with regard to the proposed State inebriate reformatories shall authorise the infliction of corporal punishment, and on the motion of the Home Secretary the scope of the Bill was extended to Ireland instead of being confined to England and Scotland as originally proposed.

*The Poisons Bill.*

Mr. BALFOUR intimated in the course of a statement about the business of the session that the Government will not proceed further with the Poisons Bill during the present session.

*Vaccination Bill.*

The following is the proposed new clause framed by Sir WALTER FOSTER in view of the report stage of the Vaccination Bill, viz.:—

Where a child is by this Act required to be vaccinated within six months after the birth of the child the parent or person having the custody of the child may, not less than two months before the expiration of six months from the birth of the child, make a statutory declaration of conscientious objection to the vaccination of the child, and if the statutory declaration is within seven days after its date delivered to the registrar of births for the district in which the child resides the registrar shall register the same and shall if required deliver to the parent or other person making the declaration a certificate of such registration and shall also send a copy of the certificate to the public vaccinator of that district, and thereupon an order shall not be made or proceedings taken with reference to the non-vaccination of the child mentioned in the certificate.

*The Amendment of the Pharmacy Acts.*

The Government has given an undertaking to introduce into the Bill for the amendment of the Pharmacy Acts a provision dealing with the case of companies which carry on the business of drug stores free from any of the restrictions imposed upon members of the Pharmaceutical Society.

## HOUSE OF COMMONS.

THURSDAY, JULY 7TH.

*Indian Medical Service.*

Captain NORTON asked the Secretary of State for India if he would inquire from the Government of India whether any, and if so what, proposals or recommendations had been made as to prolonging the period of Indian Medical Service Officers in Principal Medical Officers' offices to enable them to acquire a sufficient knowledge of military duties before their promotion to administrative military appointments after long years of employment in civil medical billets.—Lord GEORGE HAMILTON replied that the Government of India would forward to him any recommendations they considered necessary or likely to improve the general efficiency of the medical service, and he saw no reason for making the inquiry suggested.

*Army Medical Service.*

Captain NORTON asked the Under-Secretary of State for War what was the exact strength of army medical officers required for two army corps, this strength to include the number of army surgeons of all ranks required on the staff for bearer companies, for field, stationary, and general hospitals, and hospitals on the line of communications.—Mr. BRODRICK replied: Two army corps would require 226 medical officers, including administrative ranks; but this does not include the line of communications. The stationary and general hospitals would form a part of the line of communications. A stationary hospital of 100 beds has 4 medical officers, and a general hospital of 520 beds has 20. The number of these hospitals would depend on the length of the line, the climate, and the nature of the campaign.

*The Bullets for the Soudan.*

Mr. DILLON asked the Financial Secretary to the War Office, whether a special bullet had been manufactured to be used by the British troops in the Khartoum expedition; if so on what grounds had it been found necessary to supply the troops with a special bullet, and whether the War Office had had any medical report as to the effect of the bullet on animals before allowing it to be used in war.—Mr. POWELL WILLIAMS replied that no special bullet had been manufactured for use in Egypt. The bullet sent was that which had been adopted for general use in the army after experiment and medical report.—Mr. SWIFT MACNEILL asked whether it was the Dum Dum bullet.—Mr. POWELL WILLIAMS replied in the negative.

*Asylum Accommodation in London.*

Sir MANCHERJEE BHOWNAGGREE asked the President of the Local Government Board if he was aware that on account of insufficient accommodation for imbecile children suffering from epilepsy the guardians of the parish of St. Matthew, Bethnal-green, were recently obliged to admit an imbecile child so afflicted into a private lunatic asylum; that the Middlesex County Asylum on being applied to previously had refused to receive this case owing to the overcrowded state of that asylum; and if so, whether it was intended to take any immediate steps with a view to provide sufficient accommodation for such cases.—Mr. CHAPLIN replied: I have made inquiry into this matter and I learn that the boy referred to is eight years of age, that he was formerly an inmate of the Darenth Asylum but was removed by his parents, and that when subsequently admitted to the Bethnal-green workhouse, the guardians found a difficulty in obtaining accommodation for him either at the asylums of the Metropolitan Asylums Board or of the Asylums Committee of the London County Council and he has been sent to the Horton Licensed House. The managers of the Metropolitan

Asylums District are considering the question of additional provision and I understand that the London County Council are providing additional accommodation.

FRIDAY, JULY 8TH.

*River Pollution in East London.*

Mr. ERNEST GRAY asked the President of the Local Government Board whether his attention had been drawn to the condition of that part of the Channelsea River which lies within the county borough of West Ham; whether he was aware that under certain conditions of tide and of weather this water is little better than an open sewer and therefore dangerous to the public health; also that for several years a conflict of opinion has existed between the Lea Conservancy and the several local sanitary authorities as to the responsibility for the pollution of the river; and whether, having regard to the serious annoyance and dangers arising from the present condition of these waters, he could take any steps to have the local responsibility determined and satisfactorily discharged.—Mr. CHAPLIN replied: I believe that the facts are practically as stated in the question, but the powers of the Local Government Board are very limited in this matter and I have no authority to determine the local responsibility. I am alive, however, to the fact that the present condition of affairs is very far from satisfactory and I am taking such measures as I can to bring about an improvement. I may add that the corporation are disinfecting the Channelsea daily and they promoted a Bill this session which would have given them absolute authority to cleanse and scour the river, but the preamble was held not to be proved.—Mr. GRAY asked whether the right hon. gentleman would consider the advisability of having a public inquiry.—Mr. CHAPLIN said he had already instructed one of the inspectors of the Board to visit the locality and make a report, and in the first instance he should like to see what he had to say about the matter.

MONDAY, JULY 11TH.

*Vaccination Questions.*

The two following questions appeared on the notice paper, viz.:—Mr. CHANNING: To ask the President of the Local Government Board whether in the case of the child Frederick Edwards, whose death has been found by a coroner's inquest in Southwark to have been caused by erysipelas set up by vaccination, this child was vaccinated by Dr. Cory, superintendent of the National Vaccine Establishment, Lamb's Conduit-street; whether the lymph used was glycerinated calf-lymph and similar to that used in the case of the child Annie Little in Battersea, whose death was recently found by a coroner's inquest also to be due to erysipelas set up by vaccination; whether it has been brought to his notice that Dr. Cory, although requested to attend the inquest by the coroner, Mr. Langham, failed to attend; and, what steps he proposes to take in reference to Dr. Cory and to prevent the use of lymph which has produced these fatal results.—Mr. STEADMAN: To ask the President of the Local Government Board whether he is aware that a death occurred on June 20th, at 17, Railway-approach, London-bridge, from erysipelas following vaccination by Dr. Cory at the National Vaccine Establishment on May 24th; whether he is aware that Dr. Cory did not attend the inquest although the coroner's officer is reported to have said that he had written to Dr. Cory telling him the time of the inquiry; and whether he will give instructions that a public inquiry shall be made into all the circumstances connected with this death.—Mr. CHAPLIN, rising in his place when the first question was put from the chair, said: The hon. Member is not here to ask this question, but it is in the public interest, I think, that it should be answered and I therefore desire to answer it and also the question of the hon. Member for Stepney at the same time. The child in question was vaccinated as stated by the superintendent of the National Vaccine Establishment on May 6th. The lymph used was not glycerinated calf-lymph, the child being vaccinated with 12 other children at the same time from the same calf, from calf to arm. The 13 children were inspected seven days afterwards, on May 31st, and in all of them the vaccination had followed the normal course and it was not until twenty days after vaccination that the child was brought again to the station and found to be suffering from erysipelas. The ordinary period of incubation of erysipelas is from one to three days and the period which elapsed between vaccination and the appearance of erysipelas shows that the erysipelas was due not to the lymph, but to secondary infection during the third week after vaccination. Dr. Cory was not requested to attend the inquest. He was informed that an inquest would be held on June 30th at an hour when he had to vaccinate a large number of persons, and he therefore on the 29th visited Dr. Burke, who had attended the child, and gave him all the information he possessed as to the case. As a public inquiry has been held by the coroner, who is reported to have stated to the jury that there was no evidence that the child died from erysipelas set up by vaccination, thus confirming the information which I have received, I do not see the necessity for a further inquiry.

*Cost of the Brook Hospital.*

Dr. FARQUHARSON asked the President of the Local Government Board if he had had his attention called to a discrepancy of £70 000 between the estimate of the architect for the Brook Hospital and the final cost of this building; and if he would consent to supply the House with a return showing the actual cost of each of the hospitals of the Metropolitan Hospitals Asylum Board in comparison with the original estimate for the same.—Mr. CHAPLIN replied: Yes, sir, there is a large discrepancy, amounting to upwards of £50,000, between the estimate of the architect and the cost of the hospital buildings, and the subject is receiving my attention. If the hon. Member gives notice of motion for a return I will consider the propriety of granting it.

*Unsound or Diseased Foreign Meat.*

Mr. FIELD asked the President of the Local Government Board to explain why no prosecution could follow a person or property from a foreign company consigning unsound or diseased meat into this country; and whether he could arrange that legal penalties would ensue to importers similar to those inflicted on native producers under like circumstances.—Mr. CHAPLIN replied: When meat has been seized on the ground of its being diseased or unsound the person to whom the same belongs or did belong at the time of exposure for sale, or in whose possession or on whose premises the same is found is liable to a penalty, or may, at the discretion of the justices, be sentenced to imprisonment without the option of a fine. This provision applies equally to unsound or diseased meat, whether imported from abroad or native produce, and there is no exemption in the case of meat sent to this country by a foreign company.

*Experiments on Living Animals.*

Mr. JOHN ELLIS asked the Home Secretary what were the severer measures which he stated had been taken in respect of the persons who were reported by the inspector as having committed breaches of the Cruelty to Animals Act, 1876, by performing painful experiments on living animals without the necessary licences or certificates.—Sir M. WHITE RIDLEY: Temporary suspension of, and refusal to renew, licences.—Mr. ELLIS asked the right hon. gentleman whether he could state or lay upon the table the terms of the conditions and regulations attached by the Home Office to the licences and certificates granted to persons for the performance of painful experiments of living animals under the Cruelty to Animals Act, 1876.—Sir M. WHITE RIDLEY: The conditions are not always the same, but may vary according to the nature of the investigation. It is hardly possible, therefore, for me to state all the conditions attached to licences and certificates. The most important conditions, however (besides the limitations as to place, time, and number of experiments), and the conditions most frequently imposed are those as to reporting and the use of antiseptics. The latter condition is that the animals are to be treated with strict antiseptic precautions, and if these fail and pain results they are to be killed immediately under anæsthetics. The reporting conditions are, in brief, that a written record in a prescribed form is to be kept of every experiment and is to be open for examination by the inspector; that a report of all experiments is to be forwarded to the inspector; and that any published account of an experiment is to be transmitted to the Secretary of State. Another condition requires the immediate destruction under anæsthetics of an animal in which severe pain has been induced after the main result of the experiment has been attained.—Mr. SWIFT MACNEILL asked whether it was the case that since the Act was passed in 1876 there had never been a public prosecution under it.—Sir M. WHITE RIDLEY: I am not aware of it.—Mr. SWIFT MACNEILL: Well, I am.

TUESDAY, JULY 12TH.

*Manchester Prison Case.*

Mr. FLOWER asked the Home Secretary whether his attention had been called to the case of an insane prisoner named Edward Cox, confined in Manchester prison; and whether it was a fact that the prisoner had seven and probably eight of his ribs broken, that the medical inspector sent down to inquire into the case reported that only one of the man's ribs had been broken, while Mr. Dickinson, a London stipendiary magistrate, after a special inquiry arrived at the conclusion that seven or eight of the prisoner's ribs were broken, and, if so, what action he had taken with regard to the medical inspector.—Sir M. WHITE RIDLEY replied that he answered a question on this case in March last. The medical inspector had no opportunity of examining the prisoner until seven days after the injury. The prisoner was then still strapped up and as removal of the strap was thought to be inexpedient and the prisoner was unable to give any rational account of his injuries it was impossible for the inspector to ascertain what the extent of the injury had been. His report was that he was not convinced that more than one, or at most two, ribs were broken. In these circumstances he (Sir M. White Ridley) did not consider that any blame attached to him for failing to discover the full extent of the injury.

*Venereal Disease in India.*

Mr. JAMES STUART asked the Secretary of State for India whether a letter had been issued under date Nov. 20th, 1897, by the Government of India, Military Department, purporting to state explicitly the policy of the Government of India with respect to the future treatment of venereal disease in cantonments, stating that among other things medical officers might make arrangements to carry out from time to time the examination of women who voluntarily present themselves; and whether the statement of policy made in that letter had been sanctioned by him.—Lord GEORGE HAMILTON: The instructions issued by the Government of India in the letter to which the hon. Member refers are based on my despatch No. 25 of March 26th, 1897, which has been presented to Parliament, and I see no reason to question their propriety.

*The Superannuation of Irish Medical Officers.*

Mr. PATRICK O'BRIEN asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the case of Mr. R. B. Moore of Rockcorry, county Monaghan, who, at the age of seventy-five years and after serving forty-four years as dispensary medical officer, when obliged to retire through ill-health, was refused any superannuation; and whether, in view of such a case as this and the possibility of other similar cases, he would consider the advisability of accepting some of the amendments on the paper to the Local Government (Ireland) Bill making it compulsory on the new local bodies to grant superannuation.—Mr. GERALD BALFOUR: I am informed that the proposal to grant a retiring allowance to Mr. Moore has been twice before the guardians but that it fell through on both occasions. I could not undertake in the Local Government Bill to deal with the general question of superannuation of officers.

# Appointments.

*Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, J., M.D. Durh., L.R.C.P., L.R.C.S. Edin., D.P.H. Glasg., has been appointed Medical Officer of Health for the Burgh of Thurso.

ANCRUM, GEORGE WAYLAND, M.B., C.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Honorary Assistant Surgeon for the Gloucester General Infirmary.

GANNING, R. J., M.D. St. And., M.R.C.S., has been appointed Medical Referee for the County Court Circuit No. 38, Districts of Hertford, Edmonton, Grays Thurrock, Romford, Southend and Waltham Abbey.

BOW, M. R., M.B., M.S., has been appointed Medical Officer for the Brampton Sanitary District of the Scarborough Union, vice H. H. Davies, resigned.

CHRISTOPHERSON, J. B., M.A., M.D., B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Demonstrator of Anatomy at the St. Bartholomew's Hospital, London.

COX, E. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Second Sanitary District of the Cleobury Mortimer Union.

CRAIG, M., M.B., L.R.C.P., M.R.C.P. Lond., M.R.C.S., has been appointed Senior Assistant Physician for the Royal Bethlem Hospital for the Insane, Southwark, S.E.

DAWNMAN, C. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Burnham-on-Crouch Urban District Council.

DYER, C. HAROLD, M.D. Aberd., has been re-appointed Medical Officer of Health by the Cleckheaton Urban District Council.

EDWARDS, J. W., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Tees Port Sanitary Authority.

FROST, A. E., M.B., B.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road.

FORBES, N. H., F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Official Medical Referee for the County of Kent (County Court Circuit No. 48), under the Workmen's Compensation Act, 1897.

GOODMAN, HENRY CYRIL, M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Hospital, Kasr-el-Aini, Cairo, by the Egyptian Government.

GRAY, R. A., M.D., C.M. Aberd., has been re-appointed Honorary Physician for the Blackburn and East Lancashire Infirmary.

HARSTON, LIONEL DE COURCY EAGLES, M.R.C.S., L.R.C.P., L.M. Edin., has been appointed Medical Officer for the Workhouse and to No. 8 and 9 Districts by the Kingsbridge (Devon) Board of Guardians.

HATTON, G. STOKES, M.D., M.S. Durh., F.R.C.S.E., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the Districts of Longton, Stoke-on-Trent, Hanley, Burslem, Tunstall, and Newcastle-under-Lyne.

HAYWARD, J. W., M.R.C.S., has been appointed Medical Officer of Health by the Whitstable Urban District Council.

HILL, CHARLES A., M.B., B.C., B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Stipendary Medical Officer for the Liverpool Hospital for Consumption and Diseases of the Chest.

HOUGHTON, MURTAUGH J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the County Court Circuit No. 38, which includes Hertford, Edmonton, Grays Thurrock, Romford, Southend and Waltham Abbey.

HUTCHINSON, FREDERICK ARUNDEL STUART, M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Surgical Officer to the Hospital, Kasr-el-Aini, by the Egyptian Government.

HYSLOP, T. B., M.D. Edin., M.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Superintendent for the Royal Bethlem Hospital for the Insane, Southwark, S.E.

JEFFERY, E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Second Sanitary District of the St. Austell Union.

LAWSON, T. C., M.R.C.S., has been appointed Medical Officer for the Stogumber Sanitary District of the Williton Union.

MACKAY, W. B., M.D. Edin., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the County Court Circuit No. 1, comprising the Districts of Berwick, Belford, and Wooler.

MADDEN, FRANK COLE, M.B., B.S. Melb., F.R.C.S. Eng., has been appointed Professor of Surgery at the Egyptian Government School of Medicine, and Senior Surgeon to the Kasr-el-Aini Hospital, Cairo.

MARTIN, J. M. H., M.D. Vict., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for No. 4 County Court Circuit, which comprises Blackburn, Haslingden, Bacup, and Clitheroe.

MAY, F. H., L.R.C.P. Lond., M.R.C.S., D.P.H. Glasg., has been appointed Medical Officer of Health and Medical Attendant at the Hospital by the Aston District Council.

MILTON, FRANCIS RALPH SEPTIMUS, M.R.C.S., L.R.C.P. Lond., has been appointed Professor of Clinical Surgery at the School of Medicine, and Surgeon to the Hospital, Kasr-el-Aini, Cairo, by the Egyptian Government.

MOIR, J. MUNRO, M.D., C.M. Aberd., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the District of the County of Inverness (Mainland).

NOBLE, H. P., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Honorary Anæsthetist for the Children's Hospital, Paddington-green, London.

NUTTING, E. S., M.B., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the County Court Circuit No. 18, comprising Nottingham, Newark, Mansfield, and Bingham.

ORFORD, R. J., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer by the Market Bosworth Rural District Council.

PARRY, L. A., M.B., B.S., F.R.C.S., has been re appointed Honorary Physician to the St. Pancras and Northern Dispensary, Euston-road, London.

POTTER, J. C., M.B. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Tudhoe Sanitary District of the Durham Union.

RISELEY, STANLEY, M.D., C.M. Edin., has been appointed Honorary Ophthalmic Surgeon to the Sheffield Royal Hospital.

SANDELL, H. W. A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Limsdale Urban District Council.

SMITH, G. P., L.S.A., has been appointed Medical Officer of Health by the Wivenhoe Urban District Council.

SPICER, W. T. HOLMES, M.A., M.B. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields, E.C.

STEWART, F. G., M.R.C.S., has been appointed Medical Officer of Health by the Wadebridge Urban District Council.

STONEY, W. W., M.D. Vict., B.S., has been appointed Medical Officer of Health for Kimberley and Beaconsfield.

TOLLER, SEYMOUR GRAVES, M.D. Lond., M.R.C.P. Lond., M.R.C.S., has been appointed Professor of Clinical Medicine at the School of Medicine, and Physician to the Hospital, Kasr-el-Aini, Cairo, by the Egyptian Government.

TRUMPER, C. B., M.B., Ch.B. Vict., has been appointed Medical Officer for the Market Rasen First Sanitary District and the Tealby Sanitary District of the Caistor Union.

WATT, J. L., M.B., C.M. Aberd., has been appointed Medical Officer for the First Sanitary District of the Third Division of the St. Germans Union.

WILKINSON, W. A. H., M.B., Ch.B. Vict., has been re-appointed Medical Officer of Health by the Gainsborough Urban District Council.

WILSON, ROBERT, M.D. Edin., has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the District of the County of Clackmannan, and to act when required in the Sheriffdom of Stirling, Dumbarton, and Clackmannan.

WOODD, CHAS. S., L.S.A., has been appointed Medical Officer for the Watermen's and Lightermen's Asylum at Penge, S.E., vice C. Geo. Woodd, resigned.

YOUNG, M., M.D., C.M. Edin., D.P.H. Vict., has been re-appointed Medical Officer of Health for the Borough of Crewe.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BOSCOMBE HOSPITAL, Bournemouth.—House Surgeon. Salary £60 per annum, with board, lodging, and washing, but no beer or spirits.

BRADFORD ROYAL INFIRMARY.—Honorary Physician.

BRENTFORD UNION.—Assistant Medical Officer for the new Infirmary, unmarried. Salary £100 per annum, with furnished apartments in the Infirmary, rations, washing, &c., subject to statutory deductions. Applications to the Clerk to the Guardians, Union Offices, Isleworth.

CARDIFF INFIRMARY.—Assistant House Physician. Also Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board, washing, and apartments.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Registrar. The post is tenable, subject to annual re-appointment, for three years. Honorarium 20 guineas per annum.

COUNTY ASYLUM, Dorchester.—Second Assistant Medical Officer. Salary commences at £130, rising to £160.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon for twelve months. Salary for House Surgeon £100 per annum. Assistant House Surgeon £50. Furnished apartments, board and washing in both cases.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Surgeon for Out-patients.

HOSPITAL FOR WOMEN, Soho-square, London.—Registrar for twelve months. Honorarium 25 guineas.

HUDDERSFIELD INFIRMARY.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and washing. Also Second Assistant House Surgeon. Salary £40 per annum, with board, residence, and washing.

LONDON HOSPITAL MEDICAL COLLEGE, E.—Lectureship in Public Health. Applications to the Warden, Turner-street, Mile-end, E.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £70 per annum, with residence, board, and washing.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two qualified medical women as House Physician and House Surgeon for nine months.

NOTTINGHAM GENERAL DISPENSARY.—Senior Resident Surgeon. Salary £170, with furnished rooms. Also Clinical Assistant for six months. Salary £60 for that period, with furnished rooms. Each has to pay one-third of the maintenance of the housekeeper and servant, whose wages are paid by the Committee.

OWENS COLLEGE, Manchester.—A Senior and Junior Demonstrator in Physiology. Stipends £150, rising to £200, and £100, rising to £150. Also an additional Demonstrator of Anatomy for the ensuing winter session.

ROYAL HALIFAX INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with an extra allowance of £9 2s. 6d. per annum. An Ophthalmic Department has been recently added to the general practice of the Infirmary. Also residence, board, and washing.

ROYAL SEA-BATHING HOSPITAL, Margate.—Resident Surgeon. Salary £100 per annum, with board and residence. Applications to the Secretary, Royal Sea-bathing Hospital Offices, 30, Charing-cross, London.

SALISBURY INFIRMARY.—Assistant House Surgeon for six months. Honorarium of £10 will be given conditionally. Board, lodging, and washing provided.

SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby, near Liverpool.—Junior Medical Officer. Salary £50 per annum, with board, lodging, and washing. Apply to Dr. S. A. Gill, Formby, Lancashire.

SUFFOLK COUNTY ASYLUM, Ralton, Suffolk.—Second Assistant Medical Officer for three years, unmarried. Salary £100 a year, with board, washing, and attendance.

UNIVERSITY COLLEGE, Bristol.—Faculty of Medicine. Demonstratorship of Physiology. Stipend £125.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, Cardiff. Assistant Lecturer and Demonstrator in Anatomy. Stipend £120 per annum. Also Temporary Assistant Lecturer and Demonstrator in Physiology for one year. Salary £120. Applications to the Registrar, University College, Cardiff.

UNIVERSITY OF ST. ANDREWS, St. Andrews.—Professors of Materia Medica and Pathology to conduct classes at Dundee.

VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE), Leeds.—Demonstrator of Pathology. Salary £150.

WESTERN GENERAL DISPENSARY, Stafford-street, Marylebone-road, London.—House Surgeon, unmarried. Salary £80, with board and residence.

WEST HAM UNION.—Resident Assistant Medical Officer for the Workhouse and School. Salary commencing at £100 per annum for the Workhouse and £25 per annum for the Schools, together with the usual residential allowances. Applications to the Clerk, Guardian Offices, Union-road, Leytonstone, E.

WEST RIDING ASYLUM, Wakefield.—Pathologist. Salary £150, increasing to £200.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon for six months. Board, lodging, and washing provided, and a small honorarium given.

WORCESTER COUNTY COUNCIL.—Additional County Analyst for the Administrative County of Worcester (exclusive of the County Boroughs of Worcester and Dudley). Salary £400 per annum, payable monthly, together with all necessary out-of-pocket expenses. Applications to the Clerk to the County Council, Shirehall, Worcester.

YORK COUNTY HOSPITAL, York.—Assistant House Surgeon. Salary £60 per annum, with board, rooms, washing, &c.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

# Births, Marriages, and Deaths.

## BIRTHS.

CROSS.—On July 7th, at Worcester House, Clifton, the wife of F. R. Cross, M.B., F.R.C.S.; High Sheriff of Bristol, of a daughter.

FULLER.—On July 3rd, at Fairhaven, Queen's-road, Richmond, the wife of J. Reginald Fuller, M.B., B.S., M.R.C.S., of a daughter.

HOME-DOUGLAS.—On June 29th, at the Braid Hills Hotel, Edinburgh, the wife of A. Home-Douglas, F.R.C.P. Edin., of a daughter.

JAMESON.—On July 4th, at "Laceby," Kent-road, Gravesend, the wife of G. B. Jameson, M.D., of a son.

PREEDY.—On July 11th, at Stanley-gardens, Willesden-green, N.W., the wife of Edward Preedy, L.D.S. Eng., of a daughter.

ROBERTS.—On July 5th, at Kingsthorpe, Church-road, Forest-hill, S.E., the wife of Francis H. Roberts, L.R.C.P. Lond., of a daughter.

ROWE.—On July 6th, at Doctor's Lodge, Borough Asylum, Ipswich, the wife of Edmund L. Rowe, Medical Superintendent, of a son.

SHACKLETON.—On June 14th, at Buff Bay, Jamaica, the wife of T. F. Shackleton, M.R.C.S., L.S.A., of a son.

WEBB.—On July 9th, at Church-street, Stoke Newington, the wife of Albert W. Webb, M.B., M.R.C.S., of a daughter.

## MARRIAGES.

BORTHWICK—COWELL.—On July 5th, at St. Pancras Parish Church, William John Walter Winfield Borthwick, M.B., son of the late Colonel Borthwick, of the 8th Madras Native Infantry, to Elizabeth, third daughter of the late Robert Cowell, of Ormesby, Middlesbrough, Yorks.

GILES—TINDALL.—On July 8th, at St. John's Church, Lewisham High-road, Arthur Edward Giles, M.D, B.Sc. Lond., M.R.C.P., F.R.C.S., of Queen Anne-street, W., second son of Samuel Giles of Tyrwhitt-road, S.E., to May Hartree, eldest daughter of Alfred A. Tindall, of Wickham-road, S.E.

HEESON—MILLER.—On July 7th, at Redhill Congregational Church, Edwin Ernest Darley Heeson, L.D.S. Eng., elder son of James Ernest Heeson, of Redhill, to Maude Agnes, eldest daughter of William Miller, of Maybury Lodge, Reigate.

HENDLEY—PETRIE.—On July 7th, at the Parish Church, Eastbourne, by the Rev. J. H. Copleston, Rector of Offwell, Devon, assisted by the Rev. H. B. Ottley, Vicar of the Parish, Surgeon-Captain Arthur Gervase Hendley, I.M.S., youngest son of the late Surgeon-General John Hendley, C.B., to Jessie Graham, eldest daughter of J. H. Petrie, Esq., 5, South Cliff, Eastbourne.

KENDALL—CONSTABLE.—On July 12th, at St. Stephen's Church, Hampstead, Herbert William Kendall, M.R.C.S., L.R.C.P., of King's-parade, Clifton, Bristol, to Elizabeth, third daughter of the late Rev. Henry Constable, M.A., Rector of Desert More, Co. Cork.

LANSDOWN—FULLER.—On July 6th, at the Parish Church, Lydford, Francis Poole Lansdown, M.R.C.S., of Clifton, Bristol, to Sarah Sophia, daughter of the late Wm. Fuller, Moor Lodge, Lydford, Devon.

MUMFORD—JAY.—On July 6th, at St. Mary Abbot's, Kensington, Wilfred George Mumford, M.R.C.S., L.R.C.P., of Bartlett's-passage, Holborn, to Louisa Sylvia Dora, daughter of the late Stephen Octavius Jay, of Addison-crescent, Kensington.

## DEATHS.

BOSWORTH.—On July 12th, 1898, at Grove-end, Sutton, Surrey, Emily Sophia, wife of John R. Bosworth, M.R.C.S., &c.

GILL.—On July 11th, at Montreux, Shrewsbury, John Gill, L.R.C.P. Lond., M.R.C.S. Eng., of Welshpool, Montgomeryshire, aged 55 years.

WILSDEN.—On July 9th, at the Vicarage, Wooler, Alfred Wilsden, M.B., second son of Rev. Canon Wilsden, aged 30 years.

***N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.***

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, July 14th, 1898.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radia in Vacuo. | Maximum Temp. Shade. | Min Temp. | Wet Bulb. | Dry Bulb. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| July 8 | 30·15 | N.E. | ... | 109 | 71 | 57 | 56 | 61 | Cloudy |
| ,, 9 | 30·27 | N.E. | ... | 87 | 64 | 53 | 52 | 56 | Overcast |
| ,, 10 | 30·31 | N.E. | ... | 73 | 60 | 54 | 53 | 56 | Overcast |
| ,, 11 | 30·33 | N.E. | ... | 113 | 73 | 51 | 53 | 56 | Overcast |
| ,, 12 | 30·18 | N.W. | ... | 117 | 78 | 55 | 59 | 63 | Hazy |
| ,, 13 | 29·87 | N.W. | ... | 111 | 71 | 61 | 56 | 62 | Cloudy |
| ,, 14 | 30·06 | W. | ... | 116 | 73 | 53 | 52 | 57 | Fine |

# Notes, Short Comments, and Answers to Correspondents.

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only*, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

### BRITISH MEDICAL ASSOCIATION MEETING AT EDINBURGH.

DURING the forthcoming meeting of the British Medical Association at Edinburgh the Representatives of THE LANCET can be consulted at the Imperial Hotel with regard to our report of papers and proceedings.

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1898, which was completed with the issue of June 25th, and the Title-page to the Volume were given in THE LANCET of July 2nd.

### VOLUMES AND CASES.

VOLUMES for the first half of the year 1898 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

## THE TERROR OF THE FASHIONABLE HAIR-COMBS.

THE *Manchester Courier* states that two accidents have occurred outside the theatres—the Criterion and the Prince of Wales's are mentioned—owing to the ignition by over-head gas-jets or casual sparks from smokers' pipes, cigars, or cigarettes of "tortoiseshell" combs while worn in the hair. In one case (says our contemporary) the lady would have been seriously injured had not a fireman deluged her with water.

## "COMBINATION SURGICAL SCISSORS AND DRESSING FORCEPS."

*To the Editors of* THE LANCET.

SIRS,—Allow me to say that the above instrument, described by Mr. H. de P. Veale in THE LANCET of June 25th, is no new invention. Some ten years ago while at Guy's Hospital I had made for me by Messrs. Down Brothers an instrument of the kind described which I still possess. It is practically a narrow pair of scissors with the ends flattened and serrated at right angles to the cutting edge of the blades. I was under the impression then that I had invented a new surgical instrument, but I learnt subsequently that the idea was an old one.

I am, Sirs, yours faithfully,

July 1st, 1898. FREDERICK VICARS, M.D. Brux.

## "THE PUBLIC PARKS."

*To the Editors of* THE LANCET.

SIRS,—In your annotation "The Public Parks" in THE LANCET of July 9th you say with regard to the vagrants, "the vermin which infest them are not likely to leave them and roam in the grass." I wish this were the case. Two years ago my little boy of two years old escaped from his nurse and sat down on the grass in Hyde Park for a few seconds or minutes. When he came home more than a dozen active specimens of pediculus were found on his clothes. The little daughter of a physician of my acquaintance had a similar experience. Since that time my children's liberty and pleasure have had to be severely curtailed when in Hyde Park.

I am, Sirs, yours faithfully,

July 9th, 1898. PATERFAMILIAS.

## A NEW POCKET MICROSCOPE.

MR. H. WILLIAMS, 90, Shacklewell-lane, Hackney, N.E., has submitted for our inspection a pocket clinical microscope. It consists of a plano-convex lens mounted in a handle. The substance to be examined is spread upon the plane surface moistened with a drop of water. The instrument is of quite sufficient power to show the corpuscles in a drop of blood as separate bodies. Crystals and cells in the urine can also be seen, but we were unable to detect casts by its aid. As it is easily carried about in the pocket it will be found a useful instrument for making a rough diagnosis at the bedside. The price is 10s. 6d., which includes a special case.

## "THE TREATMENT OF SEA-SICKNESS."

*To the Editors of* THE LANCET.

SIRS,—In reply to "M.R.C.S., &c.," whose letter under the above heading appeared in THE LANCET of June 25th, I may say that I have found the following suggestions copied from Dr. Burney Yeo's "Manual of Medical Treatment" very useful: "It is of great importance to follow a careful and simple diet for a week or two before undertaking a sea voyage, and to take two or three doses of aperient medicine during the same period before embarking. Bromide of ammonia is regarded by some ship surgeons as the best of all remedies both for prevention and cure. It should be begun a day or two before embarking on a long voyage; a dose of 20 gr. in an ounce of water with 15 gr. of sodium bicarbonate twice or three times a day. It will remove acidity and promote gastric anæsthesia."

I am, Sirs, yours faithfully,

June 28th, 1898. LATE SURGEON M.D.S.F.

## LONGEVITY AND WINE.

ACCORDING to *La Médecine Moderne* red wines are preferable to white wines because the consumers of the former live longest. A viticulturist of the Gironde bethought himself to carry out an investigation as to human longevity in white and red wine districts respectively, taking as his basis the electoral lists in the various departments. Among 7738 electors domiciled in a red wine country he found 381 individuals who were more than seventy-five years old, whereas among 3029 electors belonging to a white wine country there were only 81, an appreciable difference. Yet red wine is more easily adulterated than white wine.

## A NEW HYPODERMIC AND ASPIRATION SYRINGE.

IN the current number of the *Deutsche Medicinische Wochenschrift* Dr. F. Lüscher, of Berne, describes a new pattern of syringe which is said to be equally suitable for the giving of hypodermic injections and for the aspiration of considerable quantities of fluid. It consists essentially of an indiarubber air-ball, to the outlet of which is attached one end of a removable glass tube serving as the receiver for the fluid to be either injected or aspirated, the needle or trocar with cannula being in communication with the other end of the receiver. Only one-half of the air-ball is compressible, the other half being rigid, which is found to make it more convenient to work, and by means of a small air-hole, which can be closed at the proper time with the forefinger, the ball can be used either as a force pump or an exhaust pump. Glass receivers for use with the same air-ball may be made in a great variety of sizes and shapes, varying from a capillary tube to a burette having a capacity of 30 c.c. (about 1 fl. oz.). The ends of the receiver can be sealed by fusion for the safe preservation of pathological fluids which have been aspirated. For sterilisation the whole apparatus can be boiled in soda solution for 12 hours without being injured. Further particulars may be obtained from Mr. G. Klöpfer, instrument-maker, of Berne.

## A QUESTION OF ETHICS.

THE following has been submitted to us by a medical correspondent who received it from Woodhall Spa. As Northcote House is not the only building at Woodhall Spa where patients can live, and seeing that anyone is perfectly free to choose his own medical man, we think the wording of the circular is unwise.

"NORTHCOTE HOUSE, WOODHALL SPA,

"June 16th, 1898.

"DEAR SIR,—As you may be aware, I have, as a Spa Practitioner with an experience of the virtues of the Woodhall Spa waters extending over many years, circulated amongst our profession a considerable amount of literature, which I have written on the subject from a very early date, when Balneo-therapy, based on scientific principles, was first introduced by me to my medical brethren.

"In consequence patients are frequently sent to Woodhall with letters of introduction to me; but it has recently come to my knowledge, from letters written to me by my professional friends, that patients sent by them have, on their arrival, been led to go into lodgings, or to hotels, where representations have been made to them, whereby they have been induced to consult other Practitioners.

"Feeling sure that you would disapprove of such a reprehensible practice as that of which I complain, I should be much obliged, in case you should be desirous to place any of your patients under my care, if you would be good enough to warn them against such representations, or to forward to me a copy of your letter of introduction in order that I may call on them on their arrival.

"Yours faithfully,

"ROBERT CUFFE,

"Vice-President of the British Balneological and Climatological Society."

## UNFORTUNATE PUBLICITY.

A CORRESPONDENT has sent us Messrs. Cox and Sharland's South of England Monthly Time Tables, in which we find the following unfortunate advertisement:—

REGISTER OF

TESTS FOR DEFECTIVE VISION

OF

CHILDREN IN SCHOOLS,

*WITH INSTRUCTIONS FOR USE,*

BY

J. F. BULLAR, M.A., M.B. CANTAB., F.R.C.S. ENG.

(Ophthalmic Surgeon to the Southampton Eye & Ear Hospital),

AND

T. G. ROOPER, M.A. OXON.

(H.M. Inspector of Schools).

LONDON:

GEORGE PHILIP & SON 32 FLEET STREET.

SOUTHAMPTON:

COX & SHARLAND, 150, HIGH STREET.

*ENTERED AT STATIONERS HALL.*

Dr. Bullar should instruct his publishers to withdraw this advertisement from a publication which must have a wide lay circulation.

## THE CURSE OF CIRCULARS.

PROBABLY no class of men is more pestered with irritating and useless circulars, sent through the post and often disguised in the form of letters, than are medical men. A correspondence on the subject, from the point of view of the general public and of the senders of the circulars, has been published in a daily contemporary, originated by a writer who suggested methods—vigorous, certainly, and possibly in a measure effective, but at the same time likely to lead to worse inconveniences than the evil itself. This gentleman gives his servants orders to destroy all circulars coming to his house, but complains that even then some of them elude the vigilance of his "well-trained butler" and are forwarded to him with his letters when he is away from home. Now it is clear on reading the list which he gives and from the rest of his letter that even those advertisements which come in duly stamped and sealed envelopes he leaves to be opened and dealt with summarily by his domestics. A well-trained butler is not possessed by everybody and the page boy and the parlourmaid are apt in such circumstances to tear up and burn important notices

such as lawyers at times necessarily send to their clients—notices of meetings of companies and societies which the intended recipient would regard as important, dividend warrants, calls upon shares and other documents which come in long envelopes and are wholly or partly printed, while they would be sure to forward with scrupulous care or to lay on the study table the lithographed letter of the bishop who proposes to lecture on the Holy Land at Jerusalem, or to rebuild his cathedral, and the coroneted card which invites to a public dinner at which a nobleman will preside, and at which a collection will be made, together with the often carefully-veiled missive of the money-lender and the masseuse. The cheapening of the post has added an impetus to the flood of circulars and as far as we can see no combined action of the public is ever likely to check it. It may gradually be discovered that such advertisements do not pay, but meanwhile the busy man will have to glance through the contents of his letter-box himself or he will some day miss seeing something important and perhaps have serious cause to regret that he did so.

## PIOUS CONFIDENCE.

THE *Christian World* of July 7th prints an amusing example of the pious confidence which the Pasha of Damascus—like probably the majority of his congeners—is prepared to put in Allah as a practical statistician and sanitarian. The French statistical department, anxious to obtain definite information on certain matters from the Turkish provinces, sent lists of questions, to which they requested replies, to the various provincial pashas. Certain of the questions were addressed to the Pasha of Damascus and his replies ran, according to our contemporary, as follows:—

Question: What is the death-rate per thousand in your principal city? Answer: In Damascus it is the will of Allah that all must die; some died old, some young.

Question: What is the annual number of births? Answer: We don't know; only God alone can say.

Question: Are the supplies of drinking water sufficient and of good quality? Answer: From the remotest period no one in Damascus has ever died of thirst.

Question: General remarks on the hygienic condition of your city? Answer: Since Allah sent us Mohammed his prophet to purge the world with fire and sword there has been a vast improvement. But there still remains much to do. Everywhere is opportunity to help and to reform. And now, my lamb of the West, cease your questioning, which can do no good either to you or to anyone else. Man should not bother himself about matters which concern only God. Salem Aleikum!

It is clear that the doctrine held by the Christian that God helps those who help themselves finds no favour in the municipal government of Damascus.

## SEBORRHŒIC ECZEMA AND OTHER ILLS.

*To the Editors of* THE LANCET.

SIRS,—May I, through the medium of THE LANCET, ask a brother professional to give me a hint? I have for some years suffered from seborrhœic eczema, indigestion, constipation, and hæmorrhoids. For three years I have had sighing respiration (what does that point to?). The patches of skin affection are on the scalp, trunk, and limbs, and are at times troublesome. What can I do or apply to get relief, if not a cure? Arsenic increases the indigestion, ichthyol irritates. My habits are simple; my only indulgences are a little stimulant and a little tobacco in the evening. I am, Sirs, yours faithfully,

July 4th, 1898. A. B. C.

*Cuz.*—There should be a fair price for such a nucleus and our correspondent has a right to take measures to obtain it. Of course, full information should be given to, and is certain to be demanded by, the intending purchaser. From a year to a year and a half's purchase would probably meet the case, but the figure must be settled by inspection of the books.

*Mr. A. Foster Clarke.*—We do not find the person's name on the Medical Register, so that he would seem not to come under the disciplinary jurisdiction of the General Medical Council—at any rate, while their sphere of action has its present limitations.

*Ribald.*—A good signature and, in a way, a proper communication. But why does our correspondent adopt a phraseology which prevents us from publishing the letter?

*F.R.C.S. (Southsea).*—We have asked the author for the name of his publisher. The Jacksonian Prize Essays are not published in the medical press.

*Democraticus* is referred to a small publication issued from THE LANCET office entitled "Difficulties under the Infectious Diseases (Notification) Act."

*Subscriber* (Ashby-de-la-Zouch). — The Colonial Office. For the healthier and more popular places there are always many candidates.

*Rusticus.*—The inquest was held before the coroner for West London in July, 1896, and was fully reported in most of the daily papers.

*Senior* should communicate with Dr. Fletcher Little, 32, Harley-street, Cavendish-square, who will give all information.

*Tussis.*—We do not prescribe. The medical attendant will recommend a further opinion if he considers one necessary.

*J. L.*—The library as a medical library is by no means good or up to date. It contains some valuable old books.

*Alpha.*—The Students' Number will be published on Sept. 3rd, 1898.

*Legalis.*—The parallel has been frequently drawn.

*F.R.C.S. Edin.*—It is certainly preferable.

*Mrs. S. G.*—2, Fitzroy-square.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (18th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

**TUESDAY (19th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

**WEDNESDAY (20th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

**THURSDAY (21st).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

**FRIDAY (22nd).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

**SATURDAY (23rd).**—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**FRIDAY (22nd).** — BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-st., Cavendish-sq., W.).—3 P.M. Clinical Meeting. Cases will be shown by Dr. D. Grant, Dr. M. Hunt, Mr. G. Stocker, Dr. F. Potter and others.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**TUESDAY (19th).** — WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street). — 4.30 P.M. Dr. Harry Campbell: On Apoplexy and other Disorders attended by Loss of Consciousness.

DENTAL HOSPITAL OF LONDON (Royal Institute Galleries, Princes Hall, Piccadilly).—8 P.M. Conversazione. 8.30 P.M. Distribution of Prizes by the Right Hon. Lord Ludlow.

**WEDNESDAY (20th).**—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. F. Dunn: Ophthalmic Cases.

**During the week marked copies of the following newspapers have been received:** *Batley News, Hereford Times, East Riding Telegraph, Chester Chronicle, Somerset County Herald, Isle of Wight Observer, Southern Times, Herald of Wales, Times of India, Pioneer Mail, Architect, Shrewsbury Chronicle, Hinckley Times, Brighton Gazette, Citizen, Blackpool Gazette, Carnarvon Herald, Builder, Westmeath Examiner, Bristol Mercury, Guernsey Star, Cheltenham Free Press, Cambria Daily Leader, Yarmouth Advertiser, Cambs Times, Liverpool Daily Post, Boston Guardian, Midland Counties Express, Leicester Post, North British Daily Mail, Lancashire Express, Huddersfield Chronicle, East Devon Advertiser, Bedford Mercury, Leighton Buzzard Reporter, Scotsman, Yorkshire Post, Glasgow Herald, Dundee Advertiser, Manchester Guardian, Bridlington Free Press, Sheffield Independent, Western Press, Hampstead Express, West Sussex Gazette, Bridgwater Independent, Birmingham Post, Derby Telegraph, Sanitary Record, Mining Journal, Reading Mercury, Local Government Chronicle, City Press, Hertfordshire Mercury, The Indicator, Local Government Journal, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Belfast Evening Telegraph, Clifton Chronicle, Free Press (West Bromwich), Abergavenny Chronicle, Leeds Mercury, West Middlesex Herald, Prescot Reporter, Keighley Herald, Horbury Express, &c., &c.**

## Communications, Letters, &c., have been received from—

A.—Mon. J. Astier, Paris; Messrs. Allen and Hanburys, Lond.; Anderson's College Medical School, Glasgow, Secretary of; Messrs. G. Alexander and Co., Lond.

B.—Dr. H. C. Bastian, Lond.; Messrs. Bedford and Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. B. Bailey, Leeds; Dr. B. E. Brodie, Macleod, N.W. Canada; Mr. A. E. J. Barker, Lond.; Mr. G. Booth, Woodbridge; Bootle Borough Hospital, Clerk of; Dr. R. L. Batterbury; Great Berkhampsted; Brussels Medical Graduates' Association, Lond., Hon. Secretary of; Dr. Berthold Beer, Vienna.

C.—Mr. J. Colcough, Lond.; Mr. J. J. Clarke, Lond.; Christy Saddle Co., Lond.; Mr. C. E. Covernton, Birmingham; Mrs. Clare, Baden Baden; Carlisle Dispensary, Secretary of; Cardiff Infirmary, Secretary of; Chelsea Hospital for Women, Secretary of; Dr. W. Coates, St. Ann's Hill; Cornwall County Asylum, Bodmin, Clerk of.

D.—Mr. F. Davidson, Lond.; Mr. F. W. Dimbleby, Richmond; Messrs. Duncan, Flockhart and Co., Edinburgh.

E.—Esmond Cycle Saddle Co., Lond.; Mr. M. O. Eder, Lond.; Messrs. Eason and Son, Dublin.

F.—Messrs. Ferris and Co., Bristol.

G.—Dr. W. Grimfield, Edinburgh; Mrs. Gostling, Lond.; Messrs. Gaze and Son, Lond.; Mr. Penn Gaskell, Lond.; Messrs. W. Gaymer and Son, Attleboro'; Messrs. F. Gastrell and Son, Cheltenham; Galen Manufacturing Co., Lond.; Great Eastern Railway Co., Lond., Traffic Manager of; G. R., Lond.

H.—Mr. H. Hunter, Cressington; Mr. J. Hawkings, Lond.; Messrs. Hodder and Stoughton, Lond.; Surgeon-Lieut.-Col. G. C. Hall, Nainital, India; Mr. H. A. Henson, Lond.; Mr. J. Heywood, Manchester; Mr. A. Haviland, Farnborough; Mr. H. N. Hardy, Lond.

I.—Messrs. Ingram and Royle, Lond.

J.—Messrs. A. Jubb and Son, Huddersfield; Dr. H. W. Jones, Belvedere; J. H., Lond.

K.—Mr. B. Kühn, Lond.; Messrs. Knight, Frank, and Rutley, Lond.; Kreochyle Co., Lond.; Dr. C. R. Killick, Williton.

L.—Dr. J. F. Little, Lond.; Mr. R. L. Leyba, Hamburg; Messrs. Lockie Bros., St. Helens; Mr. H. K. Lewis, Lond.; Dr. T. G. Lyon, Lond.; Messrs. Lyon and Co., Lond.; Locum, Lond.

M.—Dr. F. H. Maberly, Cork; Medical Society of Victoria, Melbourne, Hon. Secretary of; *Mining Journal*, Lond.; Mr. J. Milne, Lond.; Milk Preparations Co., Brentwood; Mr. R. D. Morgan, Ynysybwl; Mr. W. L. G. Morgan, Boscombe; Maltine Manufacturing Co., Lond.; Dr. M. MacLennan, Tonga; Mr. A. J. Manasseh, Syria; M. E. G., Lond.

N.—North Staffs Infirmary, Hartshill, Secretary of; G. Newnes, Ltd., Lond.; Mr. T. D. Nicholson, Rotherham.

P.—Mr. G. R. Parker, Lancaster; Mr. G. Pernet, Lond.; Mr. C. H. Powers, Cumberland; Dr. W. H. Price, Newbridge; Mr. R. Pickett, Edinburgh; Prudential Assurance Co., Lond., Secretary of.

R.—Mr. R. B. Ross, Lond.; Miss B. Rouse, Lond.; Mr. R. Redpath, Newcastle-on-Tyne; Dr. A. Roman, Berlin; Mr. J. B. Richards, Market Rasen.

S.—Messrs. W. H. Smith and Son, Birmingham; St. Mary's Hospital Medical School, Lond., Secretary of; St. Mungo's College, Glasgow, Secretary of; Mr. S. Snell, Sheffield; Dr. R. Saundby, Birmingham; Messrs. Street and Co., Lond.

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